Deutsche PANZER

German Tanks in World War I (1917-1918)

Carlos de Diego Vaquerizo
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Abteilung 502

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THE TANK IN THE GERMAN MILITARY

In the Summer of 1916 the British military shipped to France forty tanks *Mk. I* hidden in containers. The tanks entered combat at an attack between Combles and Pozieres. During the attack many tanks broke down, some of them even before seeing action. Others became trapped in some of the many craters that were scattered all over no-man's-land, or were destroyed by the German artillery, but the few that reached the enemy's line, enabled the British to advance about two kilometers in the Flers-Courcelette sector.

This operation became the baptism of fire of the tank, so its debut on the battle ground had a powerful impact[1]: "The panic spread – recalled a German soldier – like an electric current, jumping from man to man all along the trench [...] *the bravest men came out of the trench launching suicidal counter-attacks, throwing grenades at the roofs of the tanks (sic) or shooting and stabbing any target at their reach. They were machine-gunned or squashed while others, terrified, raised their hands to surrender or retreated towards the communication trenches at the second line".*

Even if the new weapon had many notorious defects, Marshal Haig (Commander-in-Chief of the British expeditionary force in France) noted of its potential, as a complement to the infantry, and sent to London a report requesting one thousand units. The Germans were more cautious. The command of the First Army *(1. Armee)*, whose forces had endured the attack of the tanks, sent a report to the Supreme Command of the Army *(Oberste Heeresleitung / OHL)* pointing out[2]: *"We will have to wait to see if the new combat device attains the success that our adversaries believe".*

The French tanks entered combat for the first time on April 16th, 1917, north of Berry-au-Bac. A few months later the battle of Cambrai took place, and a large number of tanks saw action for the first time. The British gathered more than 400 *Mk. IV* and on November 20th [3] they launched a surprise attack. In a few hours they drove an eight kilometers wedge on the German line, but they were not able to take advantage of the situation since they lacked enough reserves. A few days later, on November 30th, General von der Marwitz started a powerful counterattack to recover most of the lost territory. At some points they even gained territory from the original line before the attack of the tanks. The fight ended on December 4th. Many abandoned tanks laid on the battlefield that were picked up by the Germans with the idea of repairing as many as they could and putting them into service.

Previous page. The German armored forces were mainly made of captured British tanks. Picture of the first captured tank. It is a Mk. II with serial number 799, a vehicle armed with two 77mm guns. (Archive Ricardo Recio).

On this page. *A7V-Sturmpanzerwagen* with armor matching to the second production run. The tank is completely covered with dust, but, still visible, the tactical marking shows that it belongs to Stuka 1. (Bundesarchiv / Bild 183-P1013-316)

At the battle of Cambrai the Allies did not achieve their target. Nevertheless, the performance of the tanks during the attack on November 20th, convinced them that this weapon could achieve the goal if used in mass and by surprise[5]. On the other hand, on the German side, the outcome of the counterattack of November 30th strengthened the opinion of those who, as Lundendorff (First Quartermaster General of the OHL), where skeptical regarding the use of tanks[6].

The core of the German military thought that both artillery and infantry were enough to break in the enemy positions as long as the attack was executed by surprise and that it reached enough depth[7]. The success of the infiltration tactics at Riga and Caporetto reinforced even more that opinion.

According to Ludendorff[8]: *"The tank (sic) was of great effectiveness at Cambrai. But at that point the tanks* (sic) *penetrated at a weak point, garrisoned partly by older troops and defended by a very deficient artillery. On all other cases, tanks had being an annoyance for the troops, but they did not accomplish any critical outcome. Of the fear of the tank* (sic) *I had a more pessimistic idea that the troop had. At the combats around Bourlon and the forest of Bourlon, our infantry knocked out the enemy tanks* (sic), *at short distance, with explosive charges and explosive packs. Our artillery destroyed them. Machine guns with steel core projectiles were good enough to penetrate them. The best anti-tank weapons* (sic) *were serenity, discipline, and fearlessness. Many brave soldiers climbed up the tanks* (sic) *or shot at them at close range. With the decline of discipline and the weakening of the morale of our infantry, the tank* (sic), *used in masses, along with the artificial fog, acquired dismal results in our operations."*

Regarding those words, General Heinz Guderain, father of the German armed weapon, pointed out that the success of the counterattack at Cambrai dissipated the profound effect that the defeat of November 20th had generated[9]: *"the infantry in those few divisions attacked by tanks was nearly anihilated; the soldiers who saved their souls were taken prisoners.*

Left. At his post of First Quartermaster General *(Generalquartiermeister)* of the OHL, Enrich Ludendorff controlled all the means of the military, economy, and politics in Germany. Ludendorff did not trust the new weapon. When he began to do so, it was too late. (Archive Ricardo Recio).

Next page. To familiarize the troops with the new weapon and in order to develop tactics to neutralize it, the Germans built simulated tanks *(Panzerwagen-Attrappen)*. The one shown is a wooden replica of a *Mk. I*, including the two big tail wheels for steering. (Archive Maurice Sublet).

His views never got to the motherland or to the ears of the Grand Headquarters. Thus, it was not strange that the opinion of the victors of November 30th prevailed, whom only a small part of them faced the tanks [...] *And this opinion reflected growing confidence as time went by. Actually, it came to be believed that with self-steam the "terror of the tank" could be overcome, as long as the troops were tightly controlled.*

Anti-tank weapons and defenses

Nevertheless, the Germans also developed their own tanks. The first units of model *A7V*, the only one that they mass produced and that entered combat, were ready too late, by the end of 1917. By then the Allies had a great advantage when it came to the use and production of these machines.

What the German Army quickly did was to adopt measures to protect itself against the new weapon. Traps and barriers were engineered, mine fields were laid, and troops were instructed in defense methods using bundle of grenades *(Geballte Ladungen),* explosive packs, mine launchers *(Minenwerfer)* and flamethrowers model *grosser Flammenwerfer*[10]. The *MG.08* also worked as a defense against tanks[11], but the ammunition normally used with this weapon did not pierce through the armor, so piercing bullet shells with steel core *(S.m.K.)* were used, but they still could not pierce 10 millimeters armor thickness[12].

By the end of 1917, the OHL requested the Commission for Weapon Testing *(Gewehr-Prüfungs-Komission)* to develop a 13 mm machine gun able to pierce any kind of armor, including those of some planes. Nevertheless, even if there was already a prototype by summer 1918, the project did not see the light due to the end of the war. Anyway an antitank rifle of the same caliber that was delivered to the troops by mid-January 1918[13] saw the light. This rifle, named *Tankgewehr* and which operation required two men, weighted about 16 kilos, had a tripod like the *MG.08/15* (light version of the *MG.08*) and shot projectiles that could perforate a steel sheet over 20 mm thick at 200 meter[14] distance.

In March 1918 a small antitank barrel of 2 cm came into service, a weapon developed by Becker, whose projectiles could penetrate 15 mm armor at 200 meters. This barrel was issued to the detachments of elite machine-guns *(M.G. Scharfschützen-Abteilungen)*, but soon it proved not to be the adequate weapon. All the guns were recalled and sent to Germany for different upgrades.

The best way to knockout a tank was with a direct artillery hitting at short distance. Tank armor was no match for infantry guns *(Infanteriegeschütz)* and close proximity

On this page. The *Tankgewehr* was a 13 mm antitank rifle which had to be handled by two men. This weapon carried a bipod, like the one used with the light machine gun *MG.08/15*. Shown, a *Tankgewehr* captured by the French during the Greman offensive of 1918. (Archive Ricardo Recio)

Next page. Elite machine gun troops with a *Becker* barrel mounted on a *MG.08* stand. This gun was also issued to the *Jäger-(Sturm)-Bataillon Nr. 3* to be tested, and the conclusion was that the weapon showed serious flaws, for example its length, much excessive, could difficult its use. (Archive Maurice Sublet)

Previous page. Storm troops of the *Reserve-Infanterie-Regiment Nr. 20*. Among the weapons are bundles of grenades, one of them protected with a cloth cover. These bundles were prepared with six or more stick grenades: the sticks were all removed except for the center one, and the grenades were secured with wire. (Archive Ricardo Recio).

Top of the page. The *leichte Minenwerfer auf Flachbahn Lafette* (aka *Flachbahnwerfer*), was a variation of the light mine mortar of 7.59 cm that came up in late 1917. This anti-tank weapon carried a carriage with a spade similar to the artillery pieces. (Archive Ricardo Recio).

Right of the page. The 5 cm gun *(Grabenkanone)* was a small artillery piece that was used as an anti-tank weapon. (Archive Ricardo Recio).

guns (such as *L/27 Krupp*). Also, good results were obtained using field artillery of 7,7 and 8,8 cm, trench guns *(Grabenkanone)* of 5 and 3,7 cm and the light mine-launchers fitted with stand for straight shot *(Minenwerfer auf Flachbahn Lafette or Flachbahnwerfer)*[15].

The firing plan was organized in two phases. On the first one all the pieces came into action (heavy artillery and field guns firing defensive and destructive rounds against the tanks and mainly on the accompanying infantry[16]). On the second phase only the proximity batteries (*Nahkampfbatterien*), the proximity guns, and the mine mortars entered into action in order to destroy the tanks that overcame the first fireing[17].

Regarding ammunition, the projectile of the 7.7 cm field gun could pierce a 18 mm armor at 1,000 meter distance. The same result could be obtained with a 10.5 cm gun firing at 2,000 meters. The heavy artillery (guns, howitzers, and large caliber mortars) was effective at any distance, even if at long range it was recommended to use piercing grenades[18].

The Assault Tank *A7V*

Even if the Germans did not have much confidence in the new weapon, at the end of 1916 the Supreme Command of the Army implemented an important program destined to the development and production of armored vehicles. Previously, General Ludendorff issued the following communiqué[19]: *"Without exaggerating the use of the tanks, some successes cannot be denied. At any rate, a better built tank would mean more efficient means of combat. Thus I consider advisable to proceed without delay in the construction of such vehicles.*

On this page. The tank crews did not have a specific uniform. The crews were volunteers from motorized vehicles troops *(Kraftfahrtruppe)* and artillery, machine gun, and communication units. It looks like officers wore the same uniform they wore in their former units, and most of the troop wore the *Kraftfahrtruppen* uniform. Picture of a driver from the motor vehicle troops. (Archive Ricardo Recio)

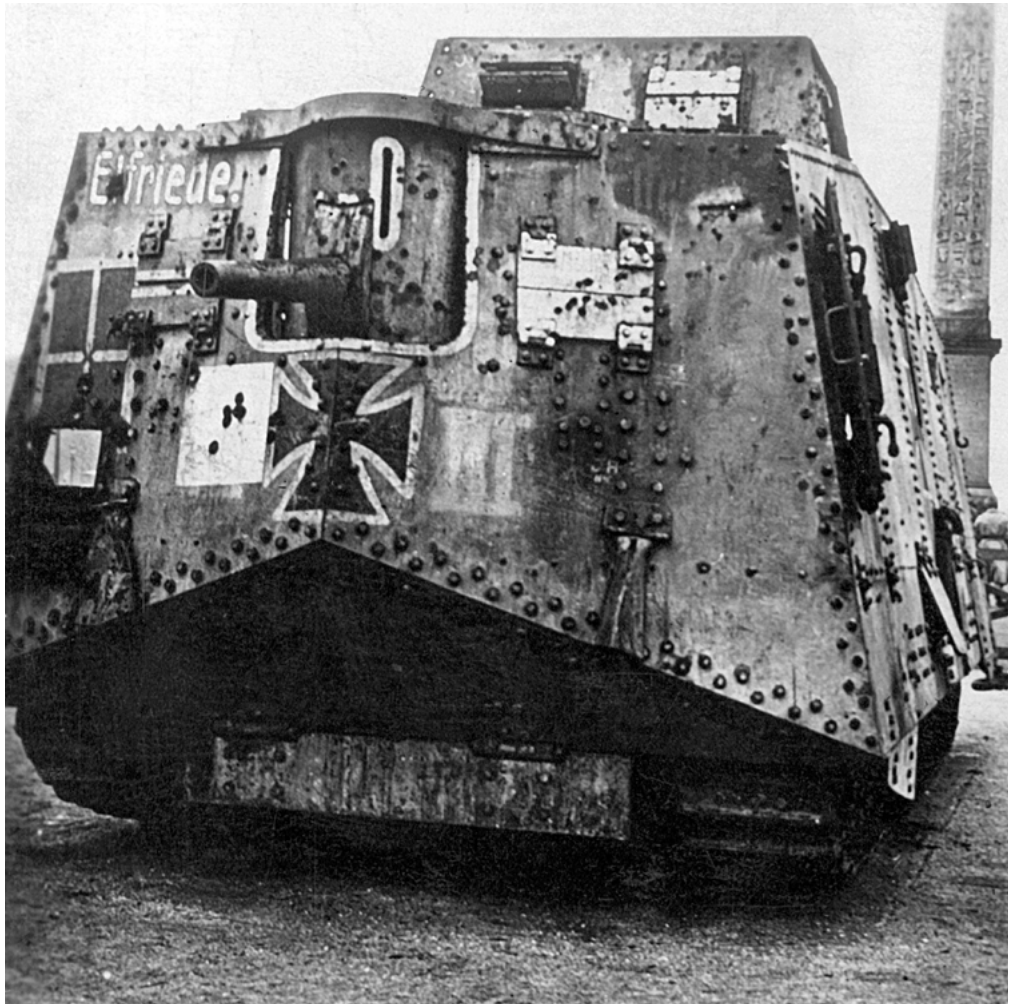
On the next page. The *A7V* 560 pictured a few days after the Battle of Villers-Bretonneux. The first tank clash in history took place at this battle, on April 24th, 1918, nearby Amiens, (France) (Archive Ricardo Recio)

When a useful model will be engineered, we must proceed with mass production".

The mass production proposed by the Assistant Chief of the OHL never materialized. During the war, the Allies built around 8,000 tanks while the German production barely went over two dozens[20]. The increasing use of tanks by the British and the French made the German Army reconsider its approach during the summer 1918. Since then, the OHL gave priority to this war machine and it set the objective of manufacturing 400 heavy tanks and 4,000 light tanks that had to be ready for service in 1919[21]. The end of the war prevented the completion of the plan, although even if the Peace Agreement would have not been reached, Germany lacked the human and material resources to achieve its objective[22].

By the end of 1916 a committee of experts lead by Joseph Vollmer (engineer of the Prussian War Ministry) was established for the development of an assault armored vehicle *(Sturmpanzerwagen)* named *A7V,* designation that came from the name of the office of the ministry that lead the project *(Abteilung 7 Verkehr* or Section 7 Transport). It was anticipated that the vehicle would weight about 30 tons, that its weaponry would consist of eight machine-guns or a gun and six machine-guns, and the power plant would be an engine between 80 and 100 horses, reaching a maximum speed of 12 km/hr[23].

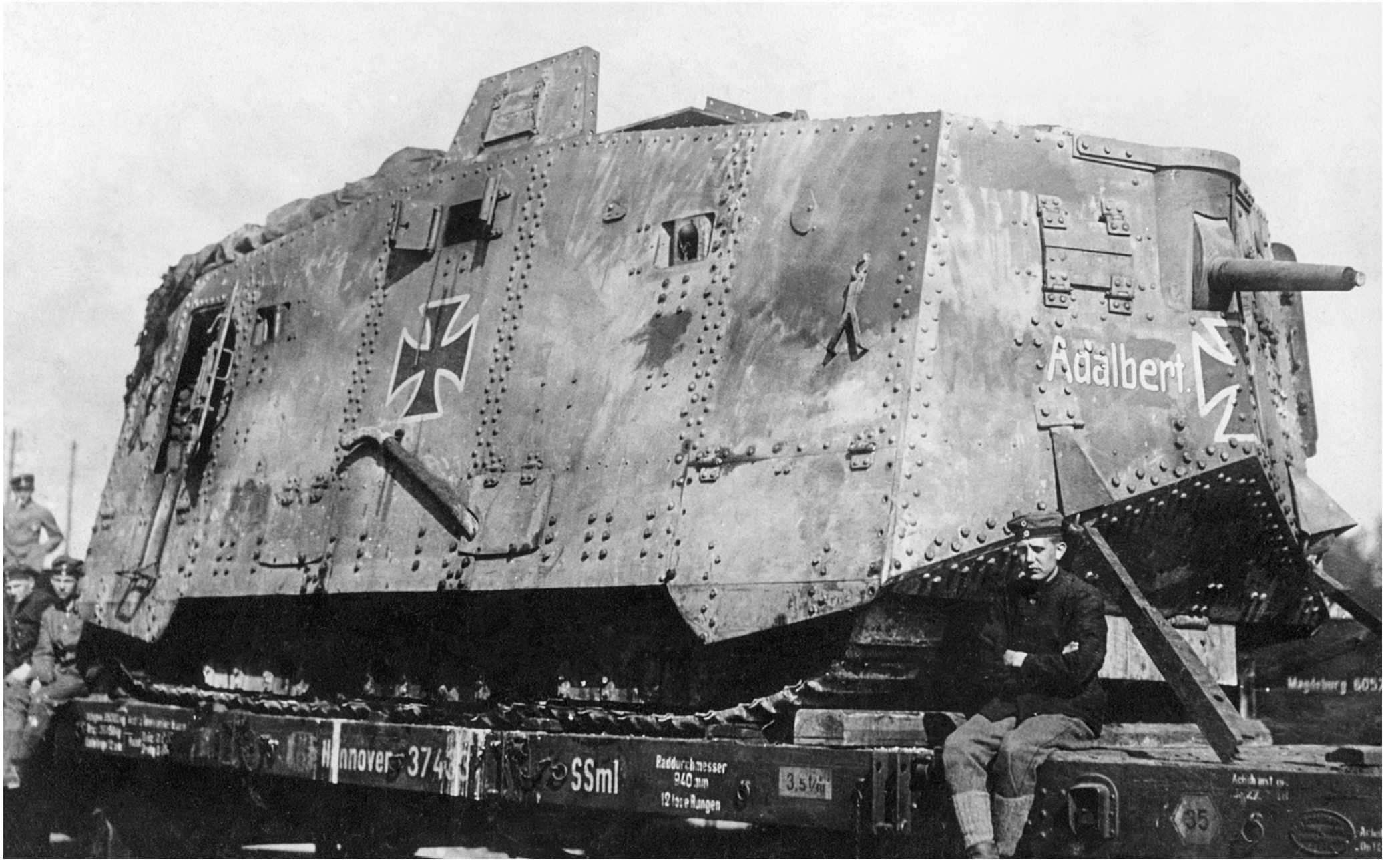
The project, from its start, had several issues, not just due to the doubts regarding the most appropriate model, or the impediments encountered by the German industry, but also because of the requirement that at the same time an all-terrain vehicle had to be developed with the same chassis as the *A7V*[24]. This last requirement compelled the use of a conventional tractor suspension.



For this purpose the North American tractor *Holt* was taken as a model, which was being manufactured in Rumania under license. Several tractors were adquired[25], although some sources say that they were provided by the Austro-Hungarian Army[26]. Vollmer's team realized that just one engine was not enough to move a tank with the characteristics that the military authority requested, so the resulting tank ended up having two engines of 100 hp each.

Previous page. Arrival of four *A7V* at Monceau-sur-Sambre, a major railroad junction located west of Charleroi (Belgium,) the location of the B.A.K.P 20, the workshop of all German tanks. The tank on the foreground still has the armor central section of the bogie. (Archive Ricardo Recio)

On this page. After its capture on September 1918, the *A7V-Sturmpanzerwagen* 542, nicknamed "Elfriede," was exhibited at the square *Place de la Concorde* in Paris. Note the front covers that hide the machine-gun apertures where two *MG.08* should have been placed on four of every five A7V. Number "III" indicates the position of the tank in the formation. (Archive Ricardo Recio).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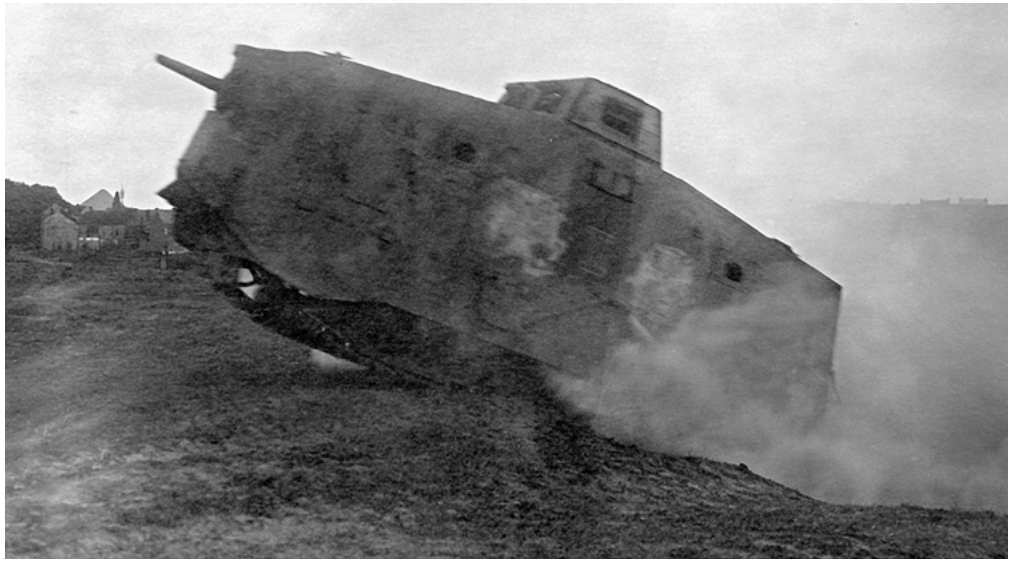

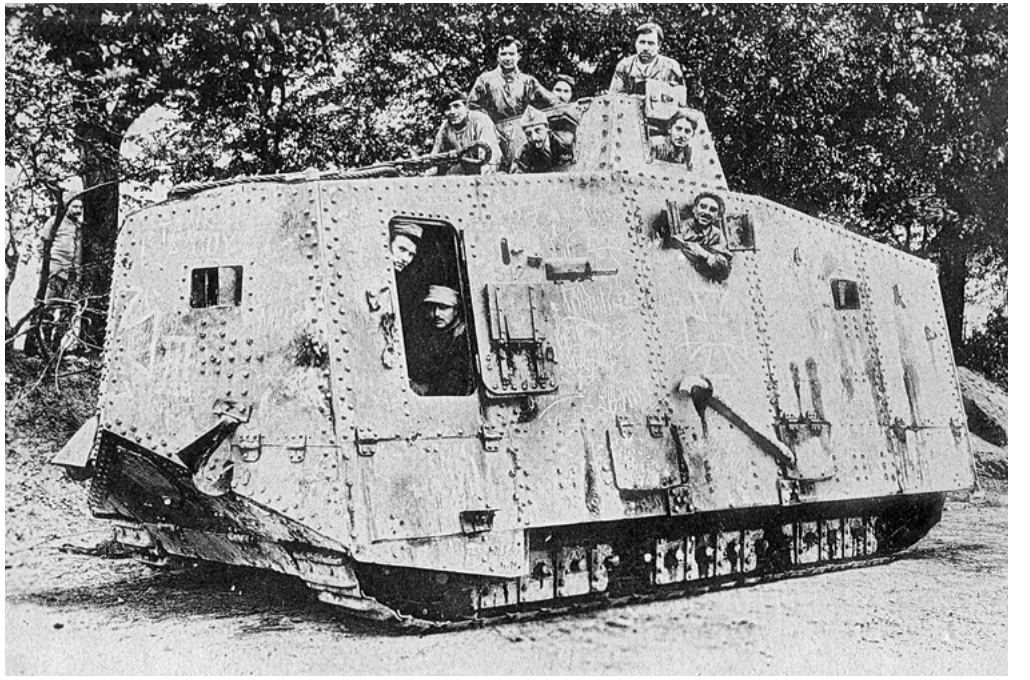

Previous page. *A7V* 543 "Adalbert" on a railway flat wagon on mid June 1918th, when Stuka 3 retook its base after the battles of Matz. The top of the casemate is in a down position as well as the front and back sides. (Archive Ricardo Recio)

On top. *A7V-Sturmpanzerwagen* with frame number 503. This tank with Krupp armor belonged to the Stuka 3. The picture was taken during maneuvers on October 1, 1918th, near Saarburg, Germany. (Bundesarchiv / Bild 146-1971-092-24).

Up, right. After the battle of Villers-Bretonneux, the *A7V* 525 "Siegfried" (second tank of the Stuka 2,) was equipped with protective plates installed on the outside of the machine-gun apertures and around the roof's casemate. (Archive Maurice Sublet)

Down, right. So many times, the capture of weapons by both sides was used as propaganda. See a *A7V-Sturmpanzerwagen* 542 captured by the French. On the inner side of the door there is a wooden folding seat. (Archive Antonio González)

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0 TONS.

The prototype (which had a wooden superstructure) was presented to the OHL at Daimler's factory in Berlin on April 30th 1917[27], but the final model, one hundred units ordered, was not ready until fall. Shortly after, it was decided that all tanks needed to be armed with a gun and machine guns, which somewhat delayed the production.

The *A7V* that was sent to the battlefields was a huge armored box, armed with a gun at the bow and six *MG.08* machine-guns placed around the vehicle (two at each side and another two at the stern). The gun was a fast shot piece *Maxim-Nordenfelt* of 5.7cm, a weapon under British patent, the Germans had plenty of those as they had captured them at the beginning of the war at fortresses in Belgium and Russia. The crew could number up to twenty-one men, that had little room to move inside, where the noise, the heat, and the exhaust gases from the engines, plus the smoke from the guns, were unbearable. The commander and the driver were located right on top of the engines. Twelve men were needed to handle the machine-guns while only two or three for the gun. The crew was complete with two or three mechanics and the person in charge of communications[28].

This tank did not have any rotating turret as the *Renault FT-17* did. Another drawback was its height, since it was a very easy target, and its all-terrain capabilities were limited by its weight and the excessively low undercarriage. Also, the armor sheets were not properly put together, and the machine-gun apertures were too wide, so bullets could come in. Despite that, the *A7V* was superior to the enemy tanks in armament, speed, and armor, and had more flexible driving gears than the British *Mk. IV*[29].

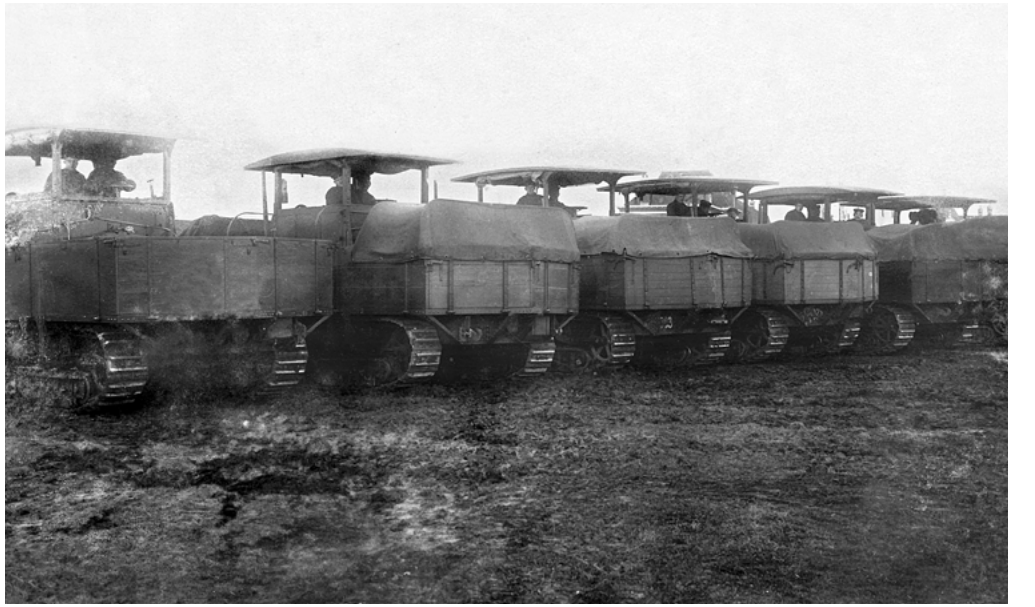
Other armored vehicles

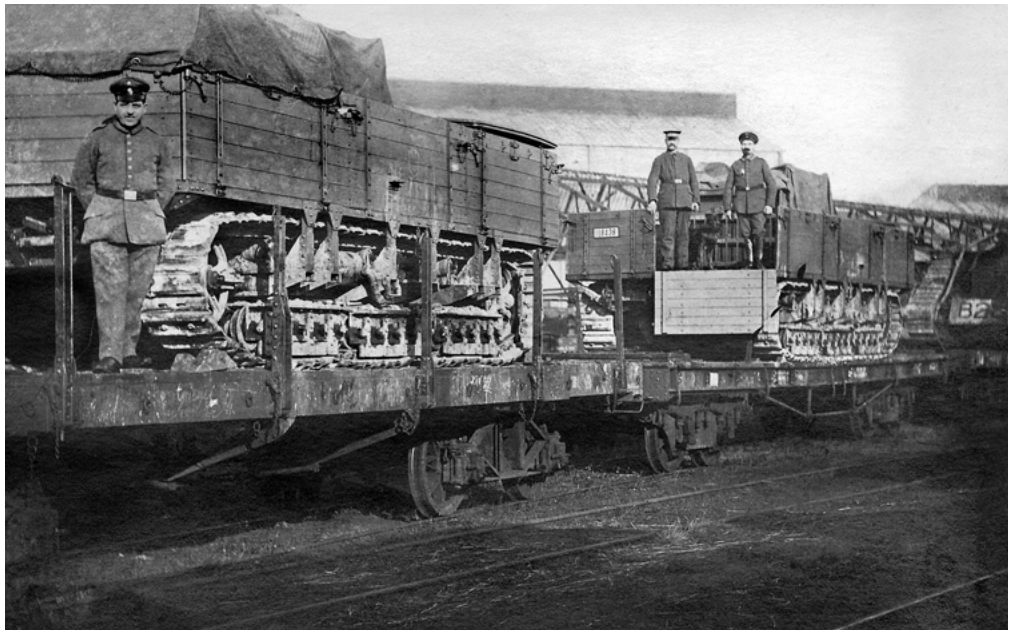
Even if only twenty units of the *A7V* were built from the one hundred ordered by the Prussian War Ministry, the German industry manufactured many more chassis. The exact number is unknown. What is known is that the leftover chassis were used for different purposes.

Some chassis were used to repair damaged tanks and others were allotted to the *Geländewagen*, an all-terrain tractor (around 30 and 40 units manufactured). The prototype *A7V* with wooden superstructure was put in service to train tank drivers in Berlin from September 1917 up to and January of the following year. Three chassis were used to manufacture two anti-aircraft vehicles *(A7V-Flakpanzer)* and a prototype of a vehicle named *A7V Umlaufendeketten (A7V-U)* designed very much like the *Mk. IV*.

Previous page. On October 1918, the *A7V-Sturmpanzerwagen* with chassis number 562 was captured undamaged by British troops while the tank was being shipped by railway from the facilities of Monceau-sur-Sambre to its designated unit. (The Tank Museum Bovington /1669-E3)

This page. The ten *A7Vs* that were part of the "first production lot" carried on the roof a grid for cooling, as shown in the picture. Those tanks, as well as the "second production lot," had a second grid at the roof level, but this was hidden, and spaced with the first one. The grids were in opposition so that the shrapnel would not penetrate the combat chamber.





Over these lines. The chassis shared by the *A7V* and the *Geländewagen* was built with a series of metal sections assembled through brackets and rivets, a structure exposed to stresses. The net weight of the *Geländewagen* was 18MT and the maximum load 8 TM. (Archive Maurice Sublet)

Up, right. The 500 litters of fuel were distributed in two tanks. It did not take the *Geländewagen* too far because the fuel consumption was about 8 l/km on pawed roads and double off-road. Besides the undercarriage, these vehicles shared several mechanical components with the *A7V*. (Archive Maurice Sublet).

Bottom, right. A convoy on its way to the B.A.K.P. to be repaired. The plate "III 8438" of the *Geländewagen* in the center of the image belongs to the 3. Armee (3rd Army,) the British tank behind that vehicle still has the tactical markings of the unit. (Archive Maurice Sublet).

Next page. This *Geländewagen* carries rods to deflect barbwires. The rods run on the four edges of the load box all the way to the roof of the cabin of the vehicle. The sides of the box are wooden ones. (Archive Ricardo Recio)

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Last, two chassis were used to develop two communications vehicles (*A7VFunkpanzer*), another one was given to the artillery to be tested as a tractor, and one was used to build an bulldozer to dig up trenches (*Schützengrabenbagger*). The last one had a different chassis than the *A7V*, but with many same undercarriage components. The number of chassis produced was far from the foreseen one hundred ones.

On June 1917, the Prussian Ministry of War decided to develop a tank heavier than the *A7V*: the *Grosskampfwagen (K-Wagen)*, a gigantic armored vehicle: one unit was almost ready when the war ended. This tank of 152 tonnes equipped with four 7.7 cm barrels was too big and heavy to be mass produced[30]. The *A7V* could neither be produced in large quantities in a short deadline. Thus, engineer Vollmer proposed a lighter vehicle, easier to produce, and with a similar design as the British *Whippet*. The initial prototype, *Leichte Kampfwagen I* or *LK-I*, was presented in March 1918, but was dismissed as the armor plating was considered insufficient. An improved second prototype, the *LK-II*, that included a version with a machine gun and another one with a gun, was accepted. Nevertheless, a few improvements were added, thus the *LK-III*, a vehicle that the Germans planned to mass produce, although they did not have enough time to finish the prototype. Regarding the *LK-II*, a few prototypes were built but in November 1918 they were still at the Daimler factory[31].

A7V Assault Tanks Detachments

Three detachments of assault vehicles or Stuka were organized with the A7Vs. Stuka is the German abbreviation for *Sturm-Panzerkraftwagen-Abteilungen*. The Stuka 1 and 2 were formed on September 29, 1917, and the Stuka 3 on the 6th of November[32]. Each detachment had seven officers, 170 men[33], and five tanks equipped with one gun and six machine guns, although originally it was planned that four of those five tanks would only carry machine guns.

Stuka 1 entered combat for the first time on March 21st, 1918, the same day that the great German offensive started. It happened at Urvilles, near Saint-Quentin, and it was entrusted supporting the *Sturmbataillon* Nr. 5 (Rohr.) Stuka 2 and 3 entered combat on April 24th, joining Stuka 1, at the first tank battle in history, that took place near by Villers-Bretonneux, (East of Amiens).

By the end of October 1918, the three Stukas merged into one unit, and a week later the unit was transferred to a base near Wiesbaden, in the vicinity of Erbenheim, Germany.

On this page. There were two versions of the light tank *LK-II*. One version with a machine gun mounted on a rotating turret and another one which had a barrel fixed to a casemate (shown in the picture). A 5.7cm gun was planned for, but then a 3.7cm one was finally chosen, which was more appropriate for the structure of the vehicle. (Bundesarchiv / Bild 146-1970-056-61 2)

On the next page. The *LK-I* was the first of a series of prototypes of light tanks that designed the engineer Joseph Vollmer, a Reserve Captain. On models *LK-I* and *LK-II* the combat chamber was installed on the rear of the vehicle, and the engine on the front, while on the *LK-III* the order was reversed. Only one *LK-I* was built, shown in the picture. (Bundesarchiv / Bild 146-1971-092-26)

Detachments of Captured Tanks

In March 1918, when the German Spring Offensive started, the bulk of the Kaiser's armored units were captured vehicles *(Beutepanzer)*. Most of them were *Mk. IV* taken from the British at the battle and counter attack of Cambrai.

The Germans were able to capture more than 50 tanks, many of them only useful as spare parts donors. Nevertheless, there were many other vehicles, about thirty, that were repaired and sent back to the battlefield organized under detachments of captured vehicles *(Beutekampfwagen-Abteilungen)*.

British tanks were repaired at *Bayerische Armee-Kraftwagenpark 20* (B.A.K.P. 20), a large mechanic workshop in Monceau-sur-Sambre (Belgium) specifically at the property of *Societé Anonyme Saint Germain* that before the war was in the business of manufacturing train cars. The first ten vehicles that were ready were delivered in March 1918 to the *Abteilungen* Nr. 11 and Nr. 12. Shortly after, four other detachments were formed: in April Nr. 13, May Nr. 14, and August *Abteilungen Nr. 15* and *Nr. 16*[34].

Tactical Use

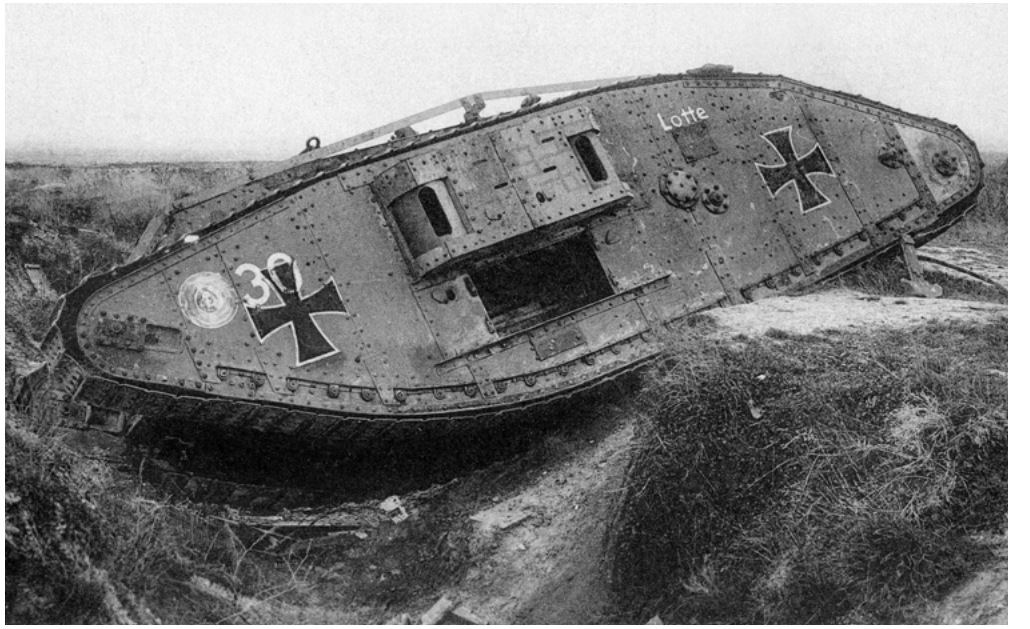
The tank detachments duty was to support the armies (*Armee)* but they were under the OHL control, which transmitted the orders to ship the tanks to those sectors where an intervention was most required.

Shipping to the front lines was carried out by rail. Loading and unloading was done at night, and always being careful to keep the enemy unaware, since the success of any attack hinged mainly on the surprise factor. The night before the operation, the tanks were at the departing line. Previously, the approach route was planned and the path cleared of any obstacles that could difficult the advance, a work done by the Army pioneers.

When preparing the missions, it had to be kept in mind that the vehicles suffered a lot during battle, and that the range of action was quite limited. Also, crews needed enough time to rest and recover, not just due to the fight, but because remaining for a long time inside a vehicle meant great exhaustion (both the noise and the heat constantly coming out of the engines were hard to endure).

Previous page. British tanks *Mk. IV* in a warehouse of the B.A.K.P. 20. During the battle and counterattack at Cambrai the Germans captured over fifty Mk. IV, although many of them could only be used as spare parts. (Bundesarchiv / Bild 102-00292)

On this page. On June 1, 1918, during the attack at Fort de la Pompelle, several captured *Mk. IV* belonging to the *Abteilungen Nr. 12* and *Nr. 14* were put out of combat by the French artillery, or had to be destroyed by their crews after being immobilized. One of those tanks, named "Liesel" (in the picture,) belonging to detachment *Nr. 14*, became trapped in a trench along the road to Châlons. (Archive Ricardo Recio)



Previous page. *Beutepanzer* number 104 with the usual B.A.K.P. 20 camouflage. Due to the difficulties mounting the *MG.08* machine guns in the British tanks, the Germans opted for recalibrating the *Lewis* model 1911 machine guns so that they could fire standard 7.92-mm German ammunition. The captured tanks fought together with the *A7V-Sturmpanzerwagen* in just three occasions: March 21st, June 1st, and October 11th, 1918. (Archive Maurice Sublet)

On top of these lines. Another picture of a *Panzerwagen-Attrappen*, in this case used to promote the purchase of war bonds, as seen on the sign of the *"Stofeld A.O.K. 3"*, the office in charge of the campaign material of the 3. *Armee.* (Archive Maurice Sublet)

Top right. A closer look at this picture reveals that several steel plates were added to the side of this captured British tank. These are "patches" placed during the repair of the vehicle at B.A.K.P. 20 in order to cover holes made by projectiles. (Archive Ricardo Recio)

Bottom right. Named "Lotte," the *Wagen 116 of Abteilung Nr. 14* was knocked-out on June 1st, 1918, near Fort de la Pompelle, east of Reims. On the side, forward, under the Iron Cross, one can see an old British tactical mark: number "30." In the sponson, the dark paint lines that camouflaged the location of the sights are still visible. (Archive Ricardo Recio)

Tanks were the first line of attack, so once the attack started they advanced on the first wave of attack. Air support covered them from the enemy's airplanes, artillery, and tanks. During the fight, a constant connection with the command was essential, so communications were a must. Tests with wireless telegraphs were unsatisfactory, among other reasons because the antenna would get tangled up with the barbwires and would finally break. The connection was carried out through observers up front, carrier pigeons, and post stations that would send reports to the command informing on the tanks progress.

Communication among vehicles and with the accompanying troops, flags and light signals were used, although more often oral communication was the most frequent method.

The tank was a close-attack-and-combat weapon whose purpose was to support the strike *(Stosstruppen)* and assault *(Sturmtruppen)* troops, so it was entrusted to help removing the obstacles that could difficult the march of the following infantry[35]. That's why the training of the crews was usually undertaken by the assault units. This was the case of Stuka 1, the most veteran of the armored detachments, which before its first combat mission, moved to Beuveille (north of France near by Longuyon) to train alongside one of the two semi-battalions *(Halbbataillonen)* that resulted from the division of the *Sturmbataillon Nr. 5 (Rohr)* before the German Spring Offensive started. The training took place with half the battalion assigned to the *36. Infanterie-Division*, and the other half assigned to the *50. Infanterie-Division.*

The intervention of the tanks had to be perfectly coordinated with the accompanying troops. During training it was underscored that a close and mutual collaboration had to be kept. The officers in command of the forces involved in an attack had to inform the tank commanders of the support that they should provide, since from the inside of the tanks one did not have an accurate view of the evolution of the combat. When the strike or attack troops stopped due to a strong opposition, the tanks should keep advancing to neutralize, or at least weaken the enemy's defenses. If a tank broke down due to a mechanical malfunction or enemy fire, all efforts had to be put to repair it. If repairing it was not possible, the crew had to destroy it and keep fighting with the weapons previously taken out from the tank. According to the regulation published in June 1918, tank crews were to have special training so that they could take action as strike troops should their vehicles be rendered disabled.

On this page. "Fritz" was the first tank of *Abteilung Nr. 14*, detachment of *Beutepanzer* organized after the start of the German Spring Offensive. On the forefront three members of a *Kleiftrupp* equipped with a small flamethrower model *Wechselapparat Flammenwerfer.* (Bundesarchiv / Bild 183-S00625)

Next page. First tank of *Abteilung Nr. 12.* The combination of the initial national emblem with the color spots on *Feldgrau, Ocker* (dark tone), and *Rotbraun* separated by dark lines was one of the first patterns known as *Buntfarben Anstrich.* (Archeve Ricardo Recio)

Over these lines. Tank *C.51* "Chaperon" with serial number 2732, abandoned near Bonavis after being hit by the German artillery on November 20, 1917. The British armor was too thin. As a fact, the Germans designed anti-tank ammunition that could be shot from the standard rifle issued to the infantry. (Archive Ricardo Recio)

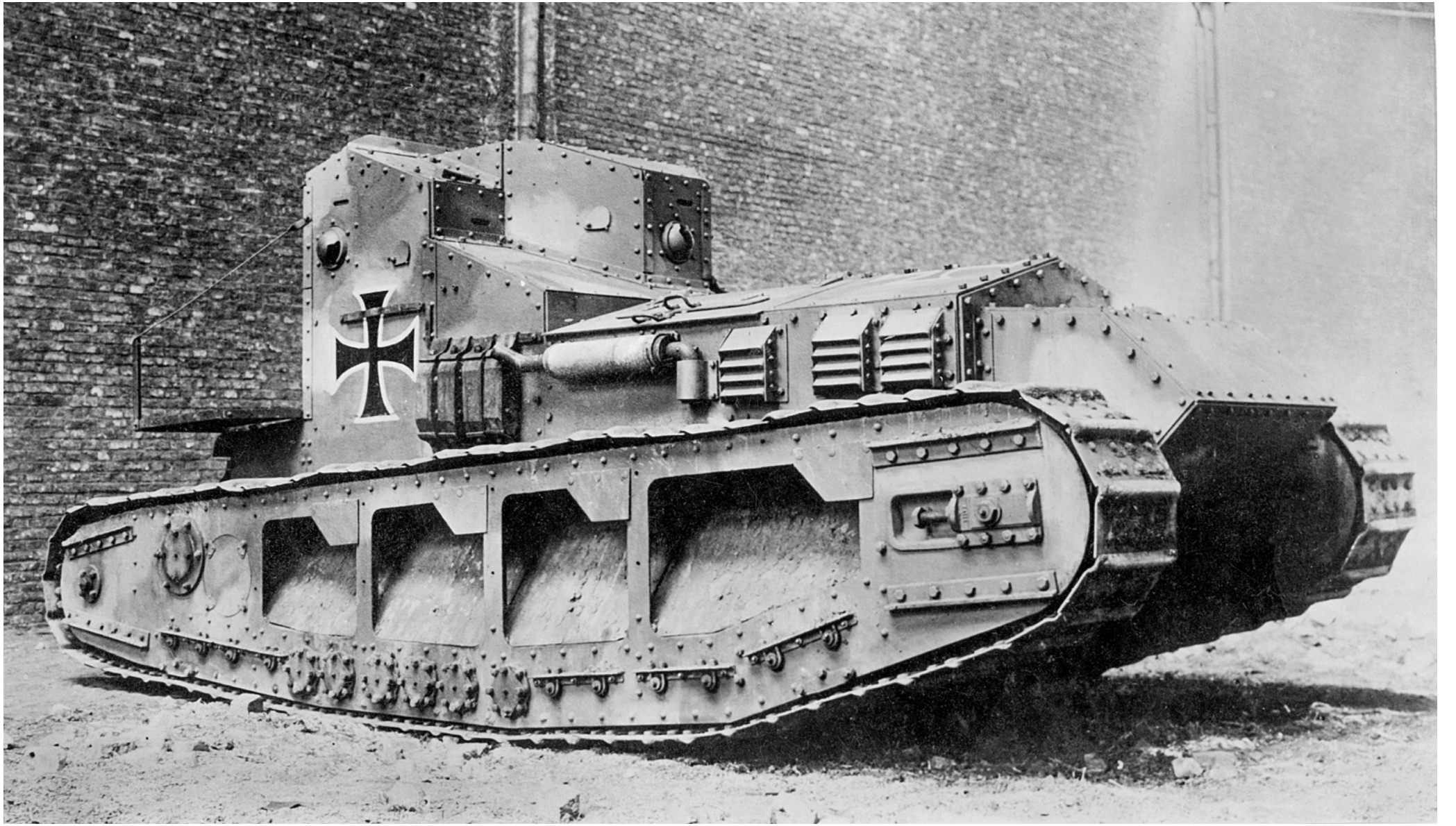
Top right. Tank *Mk. IV* version *Male*, with tactical number *B-28* and named "Black Arrow II" captured by the Germans on November 23, 1917, during an encounter at the Fontaine-Notre-Dame road. (Archive Maurice Sublet)

Bottom right. Tanks *B-8* and *C-14*, both version *Female*, were captured almost intact. The picture was taken at Cambrai train station, right before they were sent to B.A.K.P. 20. Notice the wire cutting rails and the large wooden crossbeam used to facilitate crossing ditches. (Archive Maurice Sublet)

Next page. One of the *Mk. IV Male* that the Germans captured at the battle of Cambrai. After installing two *Maxim-Nordenfelt* barrels and modifying the machine guns, it was named "Olaf." (Archive Ricardo Recio)

"MK. IV" with serial number 2337. This tank was captured by the German troops of the *Garde-Grenadier-Regiment Nr.5* on September 20, 1917. Along the hull, the sponson, and on the shield of the gun, one can notice numerous false sights painted black. These sights were painted to confuse enemy shooters. (Archive Ricardo Recio)

This British tank, captured almost intact, waits at the Cambrai's train station to be shipped to B.A.K.P. 20. There are some extensions added to the running gear tracks to improve traction... (one after each four links) that served to improve traction on soft terrains. (Archive Ricardo Recio)



Light tank *Whippet*. From all the tanks of this class that the Germans captured from the British, only two could be repaired, and they were entrusted the training of tank crews. After the war, one of this tanks was used by *Kokamp* in 1919. (Archive Maurice Sublet)

A *Mk. IV* version *Male* pictured early April 1918. It has the national emblems of the German Army. It is painted with a camo pattern of *Feldgrau, Lehmgelb* and *Rotbraun* spots. (Library of Congress)

Second tank of the *Abteilung Nr. 12*. The ring and the number "2" painted red next to the track tension adjuster bolt. The camo pattern *Buntfarben Anstrich* consisted of color spots of *Ocker, Rotbraun* and *Feldgrau,* outlined by thin black lines. (Archive Maurice Sublet)

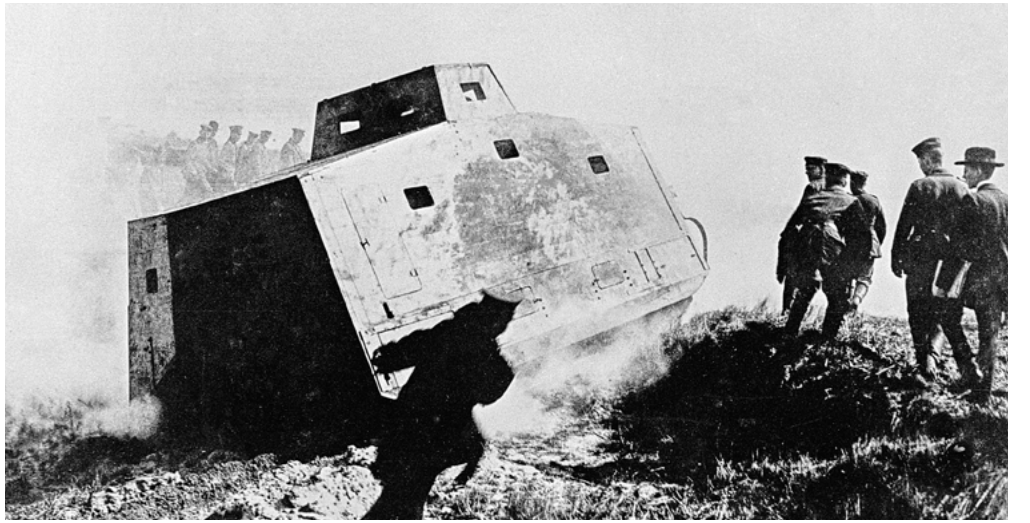
Besides the access door located on the back, the *MK. IV* had another one on each side, under the sponsons in the version *Female* and behind the sponsons in the version *Male*. Evacuating the vehicle was not easy during combat, and many crew members lost their lifes in such attempt. (Archive Ricardo Recio)

MANUFACTURE OF *A7V* TANKS

In January 1917, the firms Röchling and Krupp got the job of producing the armor plates for the first ten *A7V Sturmpanzerwagen*. These tanks, built at the Daimler factory in Marienfelde (Berlin,) were named the "first production lot." Röchling made the plates of the vehicles with chassis numbers 501, 505, 506, 507, and 530, while Krupp made the ones for 503, 504, 541, 542, and 543.

The plates needed to be 20mm thick (30mm up front and 10mm on the top) and had a homogeneous thickness along the entire surface. Krupp opted to manufacture in several parts: five for each side of the tank (not counting the armor of the bogie,) two for the front part, and another two for the rear. Röchling, on the other hand, made one entire piece, including the front and back plates, although slightly bended through the central shaft. The different manufacturing of the plates meant that once mounted, one could tell whose company had manufactured the armor[1].

The tanks with Krupp's plates were the last ones to leave Daimler's factory, which allowed for the incorporation of several improvements regarding the ones carrying the Röchling armor plates. Among the improvements, it is worth mentioning a hatch on the right side of the casemate roof for the commander of the tank. Also, in the center of the casemate, a support was added for the placement of a compass, and on both sides of the vehicle, and exhaust pipe to prevent exhaust from entering the combat chamber. Another difference of the tanks with Krupp's armor was that the doors, as well as the hatches, had two hinges instead of three.



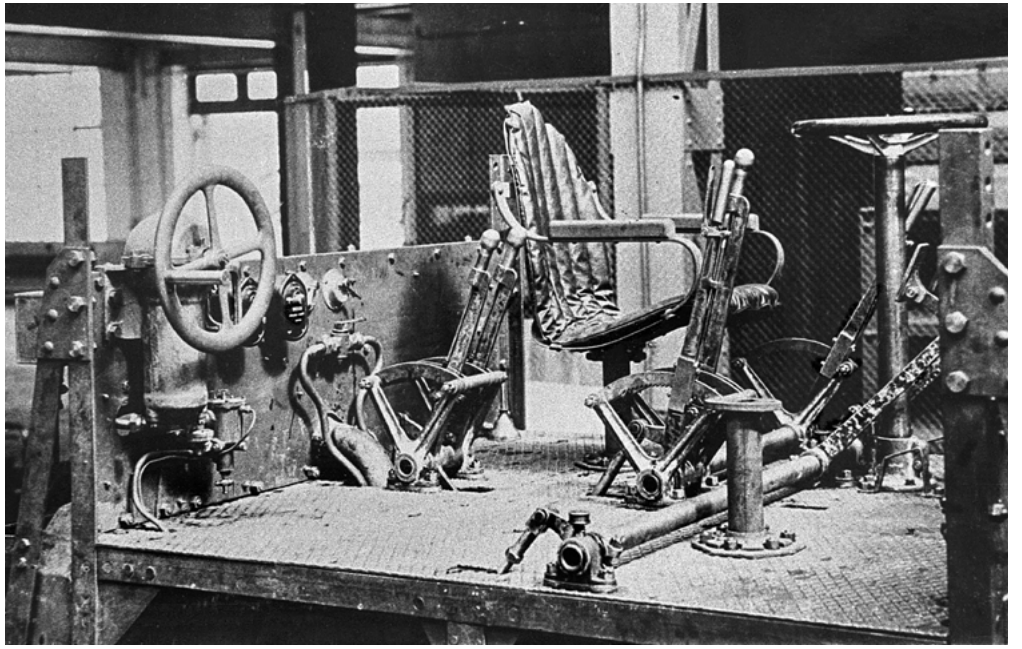
In May it was decided to start the production of the plates for the next ten tanks, named "second production lot." Specifically the *A7V* with chassis numbered 525, 526, 527, 528, 529, 560, 561, 562, 563, and 564. Even if in this case it is unknown which company got the contract, it is very likely that Röchling did, since the armor of these vehicles was the same as the five of the first lot done by this company. Even then, there were several differences. As a matter of fact, on these new tanks, all the improvements made on the Krupp armored tanks were incorporated. Plus less rivets were used in the assembly of the plates and the ventilation grids, located on the roof, were simplified, so they had a slightly different shape than the ones of the tanks in the first lot.

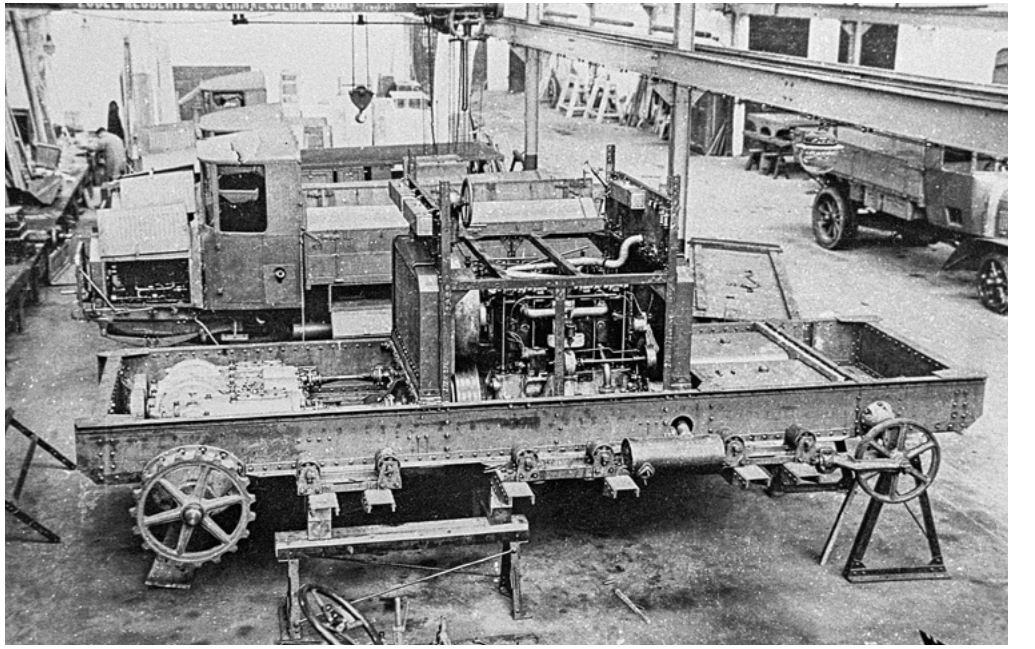
Weaponry

The original plan called for one of every five *A7V* to carry a gun installed up front. The other four would carry machine guns: two on each side, two up front, and two on the back. In December 1917, the decision was made that all vehicles had to carry

Previous page. Although the *A7V* 562 was one of those ten vehicles from the second production lot, it had two spare plates from the first lot put in the front part. This picture was probably taken in early April 1918, before the bogies' protections were removed. (The Tank Museum Bovington / 1669-C1)

In this page. May 1917. The prototype of *A7V-Sturmpanzerwagen* has some curved rails in the front part to the vehicle not to get stuck in any ditch or crater. (The Tank Museum Bovington / 1669-B2)





a barrel. Consequently, on the armor plates that had already been produced for the tanks with just machine guns, a hole had to be cut for this gun, and the holes for the MG.08 machine guns apertures had to be covered[2].

The *A7V's* barrel was installed on a pedestal or stand mounted. Obviously, the gun's shield would vary depending on the mount.

Tanks with chassis numbers 505, 506, 507, and 540, first lot and Röchling armor, the barrel was on stand mount *(Bocklafette)* same as the one that was going to be placed on the original plans for the only four *A7V* with barrel.

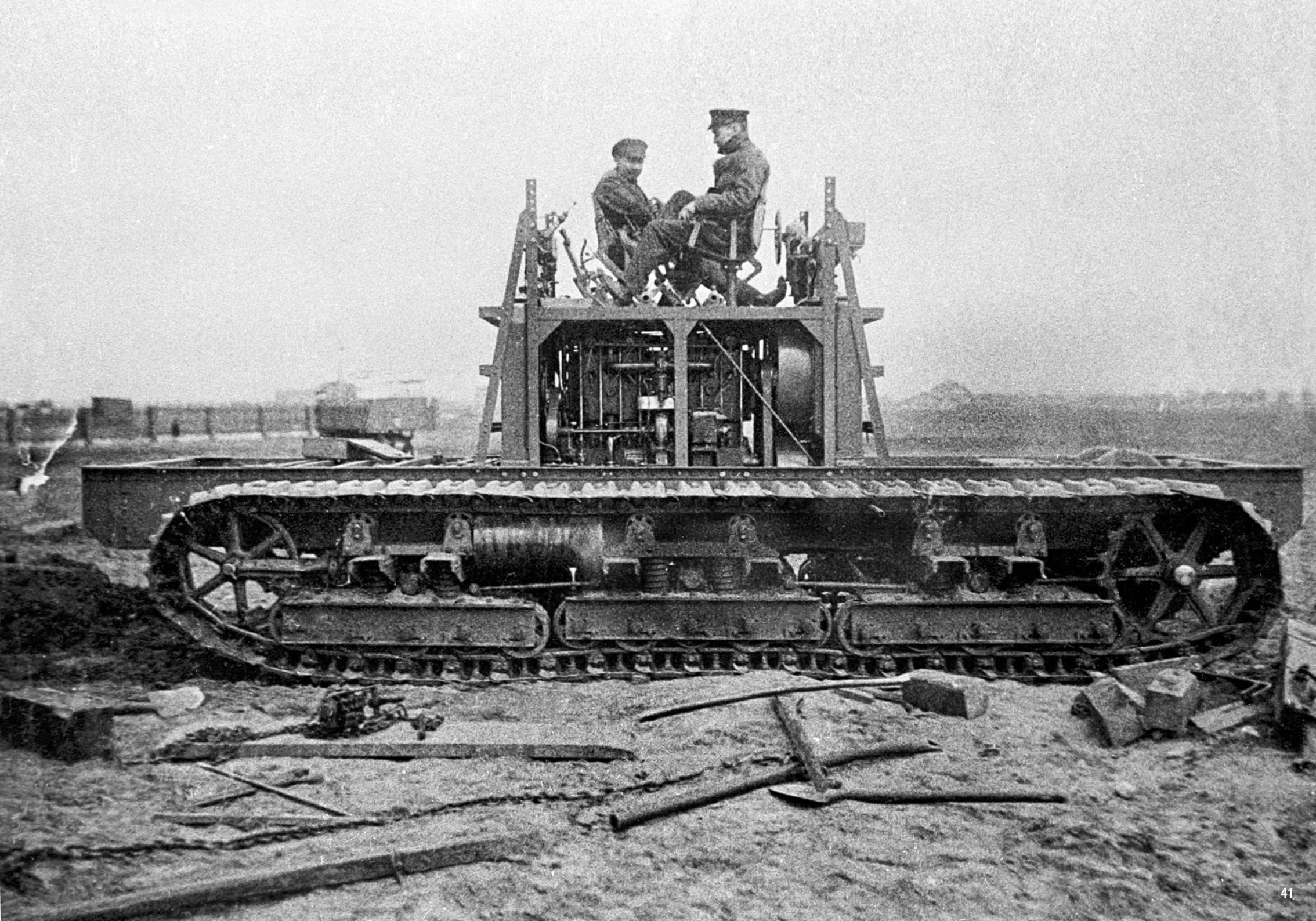
On the second lot tanks and on the first one with chassis numbered 503, 504, 541, 542, and 543, the barrel was installed over a pedestal type *Sockellafette*. This pedestal, similar to the ones on battleships, allowed the vibrations of the shots to be transmitted throughout the chassis, thus not affecting the armor plates.

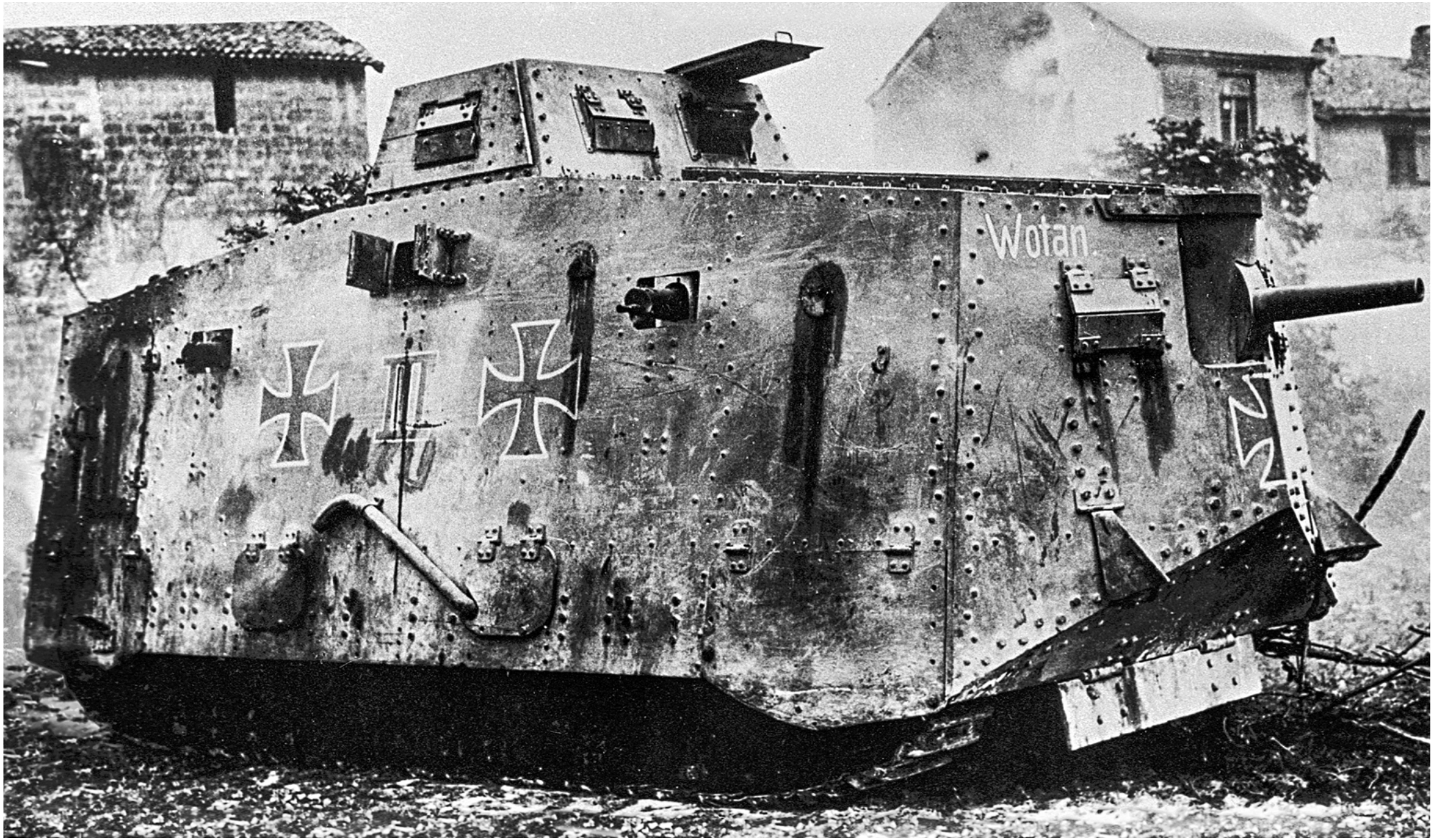
Lastly, on the *A7V* 501, the first tank of this model and the only one with just machine guns, a barrel was also installed on a pedestal at a later date, (as late as April 1918[3]).

Left on this page. The prototype *A7V-Sturmpanzerwagen* had two driver seats, one facing forward (with the steering wheel horizontal) and another facing backwards (with the steering wheel vertical). Later, it was decided to just keep the left driver seat, while the one on the right was reserved for the commander of the tank. (The Tank Museum Bovington / 1510-A5)

Right on this page. The traction wheels were at the back of the chassis. In the picture one can see the size of the gearbox, that projected underneath the chassis at about 20 centimeters from the ground. (The Tank Museum Bovington / 1510-A3)

Next page. Testing of the first chassis at Marienfelde, May 1917. The platform in the drive compartment was in the center of the vehicle, just over the two *Daimler* four cylinder 100 CV engines. The central bogie' springs were four on the production tanks. (The Tank Museum Bovington / 1510-A1)





One of the last *A7V* built had chassis number 563. This tank of the second lot belonged to the Stuka 2 and was named "Wotan." (The Tank Musem Bovington / 1860-A1)

CHASSIS	MODEL	PRODUCTION	ARMOR	BARREL BASE	ASSIGNMENT	NAME	NOTES	OUT OF SERVICE
500	A7V - Sturm-panzerwagen	Prototype	Wood	----	Drivers' School	----	Training vehicle	----
501	A7V - Sturm-panzerwagen	1st Lot	Röchling	Pedestal (May 1918)	Stuka 1, Nov/Dic 1917 Stuka 3, mid-April 1918 Stuka 1, June 20, 1918	Gretchen	Abandoned at St-Cécile, Belgium, train station	End October 1918
503	A7V - Sturm-panzerwagen	1st Lot	Krupp	Pedestal	Stuka 3, early April 1918 Stuka 1, end October 1918*	Faust/Kronprinz Wilhelm/ Wilhelm/Heiland	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
504	A7V - Sturm-panzerwagen	1st Lot	Krupp	Pedestal	Stuka 2, early April 1918	Schnuck	Destroyed by friendly fire. Captured.	August 31, 1918
505	A7V - Sturm-panzerwagen	1st Lot	Röchling	Stand	Stuka 1, Dec 1917/Jan 1918 Stuka 3, mid-April 1918 Stuka 1, late Oct 1918*	Baden I/ Prinz August Wilhelm/ August Wilhelm	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
506	A7V - Sturm-panzerwagen	1st Lot	Röchling	Stand	Stuka 1, Dec 1917/Jan 1918 Stuka 3, mid-April 1918	Mephisto	Stuck and damaged by artillery fire. Captured.	April 24, 1918
507	A7V - Sturm-panzerwagen	1st Lot	Röchling	Stand	Stuka 1, Dec 1917/Jan 1918 Stuka 3, mid-April 1918 Stuka 1, late Oct 1918*	Cyklop/ Prinz Eitel Friedrich/ Eitel Friedrich/Imperator	Taken by *Kokampf* at Marienfelde	November 11, 1918
524	A7V - U	Prototype	Röchling?	Pedestal x 2	Ready in June 1918 Test vehicle	----	Too heavy, it would sink in the mud	Dismantled summer 1918
525	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 2, early April 1918 Stuke 1, late Oct 1918*	Siegfried	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
526	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 1, April 2, 1918	Alter Fritz	Used to repare other A7Vs	June 2, 1918

*By the end of 1918 Stuka 1, 2, and 3 were consolidated into one unit. Here we have named it Stuka 1.

CHASSIS	MODEL	PRODUCTION	ARMOR	BARREL BASE	ASSIGNMENT	NAME	NOTES	OUT OF SERVICE
527	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 1, April 2, 1918	Lotti	Stuck and damaged by artillery fire. Abandoned	June 1, 1918
528	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 2, early May 1918	Hagen	Stuck and damaged by artillery friendly fire. Captured	August 31, 1918
529	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 2, early May 1918	Nixe II	Damaged by artillery. Captured	May 31, 1918
540	A7V - Sturm-panzerwagen	1st Lot	Röchling	Stand/Pedestal (May 1918)	Stuka 1, Nov/Dic 1917	----	Used to repair other *A7V*s	October 3, 1918
541	A7V - Sturm-panzerwagen	1st Lot	Krupp	Pedestal	Stuka 1, April 2, 1918	----	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
542	A7V - Sturm-panzerwagen	1st Lot	Krupp	Pedestal	Stuka 2, early April 1918	Elfriede	Tipped over. Abandoned and captured	April 24, 1918
543	A7V - Sturm-panzerwagen	1st Lot	Krupp	Pedestal	Stuka 2, early April 1918 Stuka 3, early May, 1918 Stuka 1, late Oct 1918*	Bulle/ Prinz Adalbert/ Adalbert	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
560	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 1, April 2, 1918	----	Broken chain. Blown up	October 11, 1918
561	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 2, early April 1918	Nixe	Damaged in combat and subsequently blown up.	April 24, 1918
562	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 1, April 2, 1918 Stuka 2, August 1918	Herkules	Captured in transit	Early October 1918
563	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 2, early May 1918	Wotan	Supposedly at Erbenheim on November 6, 1918	November 11, 1918
564	A7V - Sturm-panzerwagen	2nd Lot	Röchling	Pedestal	Stuka 3, early May 1918 Stuka 2, August 1918	Prinz Oskar/ Oskar	Supposedly at Erbenheim on November 6, 1918	November 11, 1918

*By the end of 1918 Stuka 1, 2, and 3 were consolidated into one unit. Here we have named it Stuka 1.

April 24, 1918, the *A7V-Sturmpanzerwagen* 542 "Elfriede" skid on a sand cliff and tipped over the right side, so the crew had to abandon it. A short time thereafter, French troops captured it. In the picture, perfectly visible, the crossbeams that reinforced the chassis of all *A7V*. (Archive Ricardo Recio)

PAINT SCHEMES

During WWI Germans painted vehicles, weapons, and diverse war materials, with a greenish shade named *Feldgrau* (literally field green). Also, taking the French as an example, they started to paint their artillery pieces with spots of different colors for these to go unnoticed by the enemy. Although, the troopers tried to paint spots using colors similar to the entourage where the tanks were going to be located, they had to use whatever paint they had at hand.

The final thought was that the most effective colors were ochre, brown, and green. From that moment on, many artillery pieces were added dots of those three colors but leaving visible wide strips of *Feldgrau* color, (the factory standard). The three colors were used to paint anti-aircraft self-propelled pieces too. Since most did not operate at the first line, the armored vehicles and so many transport vehicles were only painted *Feldgrau*.

The first *A7V* was ready by late October 1917 at Daimler's factory. This vehicle was already camouflaged at the very factory with large spots, most likely using ochre and brown paints, applied with a brush over the dark *Feldgrau* coat. The next four tanks were only painted *Feldgrau*, and then handed over to Stuka 1 in early January 1918. As soon as they reached their detachment, the tanks were painted with camo spots (with no particular pattern at all). The paints were probably the same ones used to camouflage the other artillery pieces.

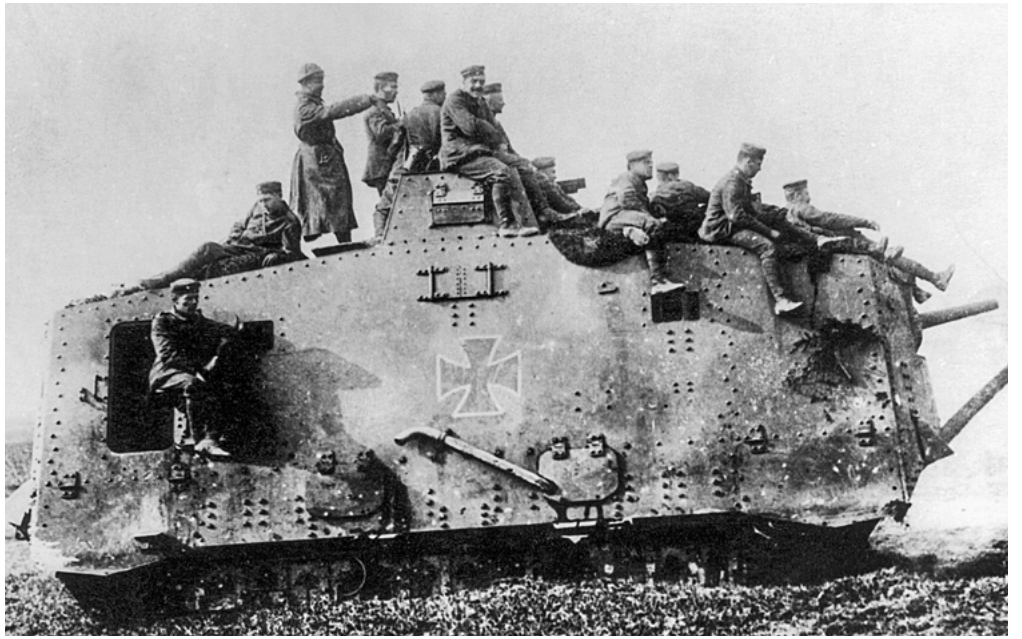
Previous page. *A7V-Sturmpanzerwagen* with chassis number 540. Painted with the camo pattern named *Buntfarben Anstrich*. On the roof and casemate there is a white strip for aerial identification. (The Tank Museum Bovington / 1669-E5)

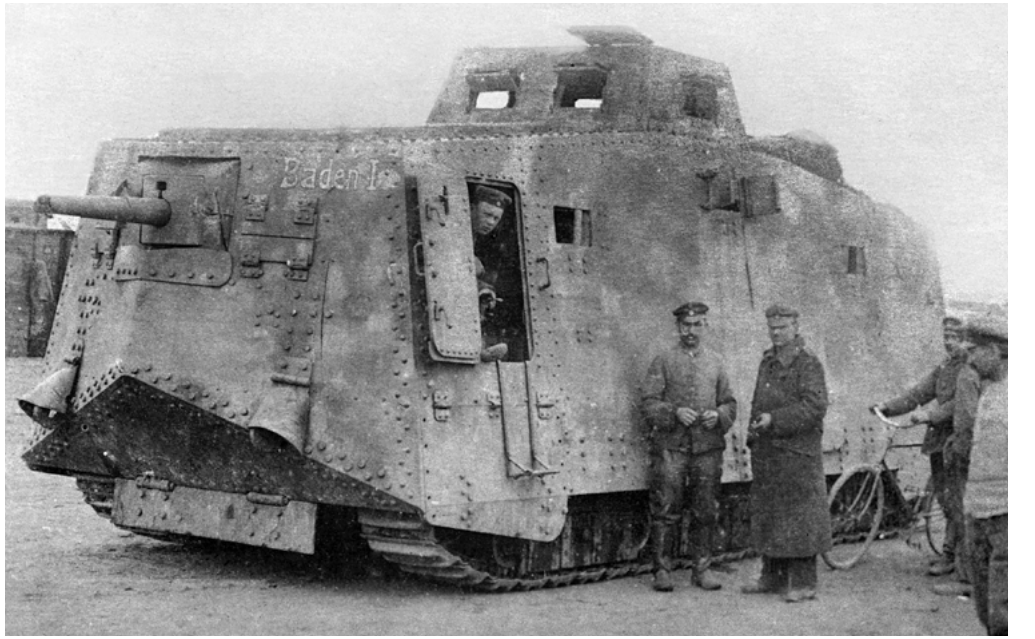
On this page. This infantry barrel Skoda of 7.5cm has a camo pattern consisting of small dots of ochre and reddish brown applied with a brush over a green tone which was the factory standard. (Archive Ricardo Recio)

Meanwhile, at B.A.K.P. 20, the first ten *Mk. IV* had been repaired. These tanks were delivered to *Abteilungen Nr. 11* and *Nr. 12* and added spots of *Feldgrau* (possibly brown too). In any case, the original British khaki was still visible.

During this time, between March and April 1918, the *A7V* assigned to Stuka 2 and 3, as well as other vehicles meant to cover eventual losses, reached the B.A.K.P. 20. Five of these matched the first production lot and were painted dark *Feldgrau* with a greenish hue, while on the ten matching the second lot that color had a lighter and greyish hue[1].

It is very likely that the Germans decided to make good use of all paint they could find when they occupied the workshops of the *Societé Anonyme Saint Germain*, a company that before the war, as aforementioned, was in the wagons' building business. As a matter of fact, the colors this company used to paint both the outer parts (dark green and reddish brown) and the interior (ivory or amber) of the passengers'





cars were very similar to the ones used by the Germans to camouflage their artillery pieces. Thus, it is very likely that the B.A.K.P. 20 personnel used those colors, along with *Feldgrau*, to camo the *A7V* and the captured British tanks.

The B.A.K.P. 20 was in charge of the maintenance of all German armored vehicles, so after every mission the vehicles were sent to this workshop to be checked, repaired and repainted. During combats there were breakdowns and failures and the paint got severely damaged[2].

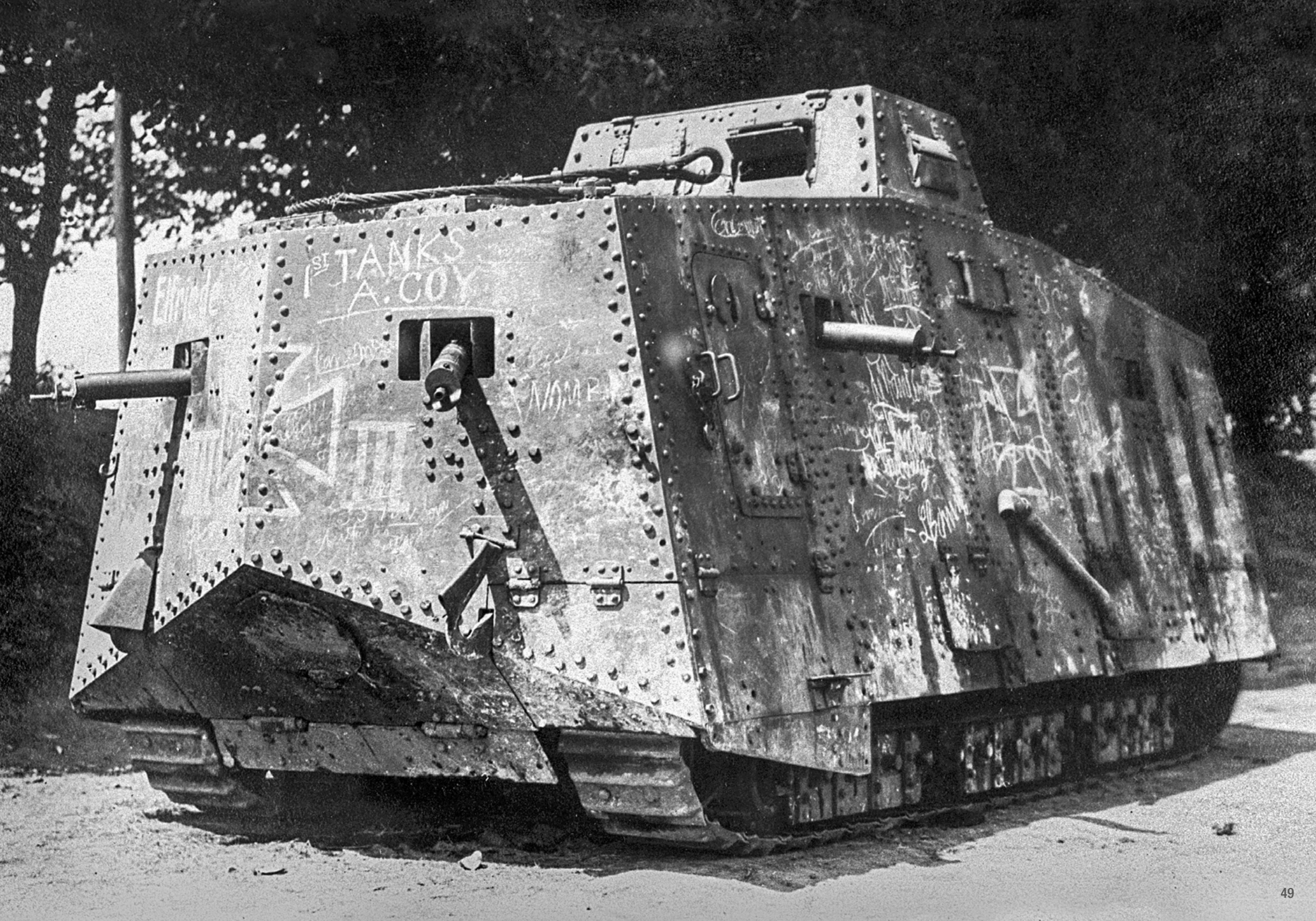
During both the spring and the summer 1918, numerous tanks were captured again. Since the work load at B.A.K.P. 20 was at its maximum, the vehicles that were in best shape were sent to Germany to be repaired and repainted ochre and brown spots over a *Feldgrau* base. These vehicles were used to equip *Abteilungen* numbered *15* and *16*.

By the end of the war, in September 1918, a new paint scheme named *Buntfarben Anstrich* was introduced. This scheme consisted of large strips of three or four colors outlined with black lines. All the *A7V* of Stuka 1, certain tanks of Stuka 2, and many *Mk. IV* were repainted this scheme.

Left on this page. The *A7V-Stumpanzerwagen* 525 "Siegfried" in a photo taken in April 1918 when the *Abteilung Nr. 2* tanks wore tactical numbers painted on the front and the back of the vehicle, and used a single national badge (the Iron Cross) on each side. (Bundesarchiv / Bild 146-1974-050-12)

Right on this page. *A7V-Sturmpanzerwagen* 505, one of the five units of the first lot whose barrel was installed on a base stand. It was the only tank of this type that wore curved shields on the tow hooks (Archive Maurice Sublet)

Next page. Rear view of the *A7V-Sturmpanzerwagen* 542 "Elfriede". On the bottom triangular shaped plate one can perfectly see the escape hatch. The camo scheme consists of *Feldgrau, Rotbraun and Lehmgelb* spots applied with brush. (The Tank Museum Bovington / 8414-C4)


1st TANKS
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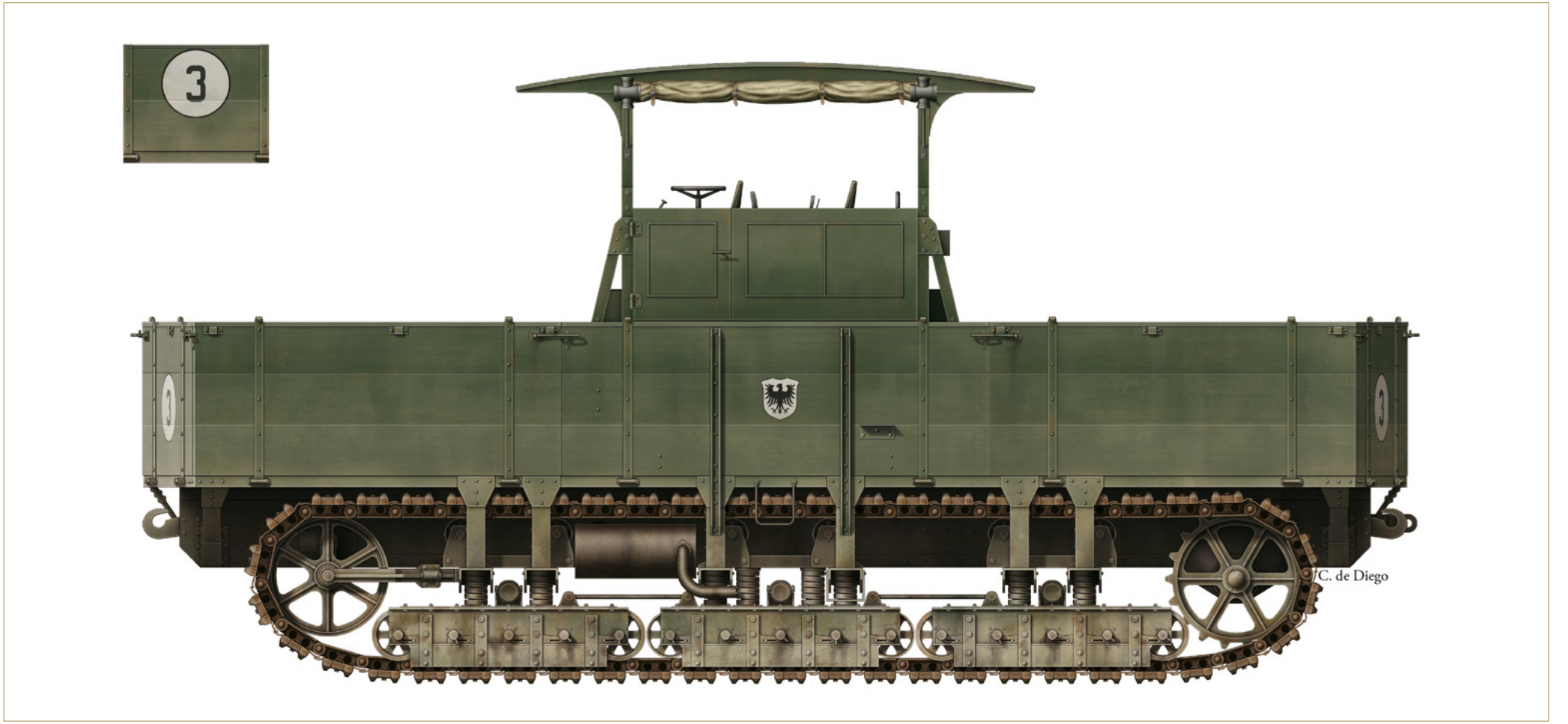
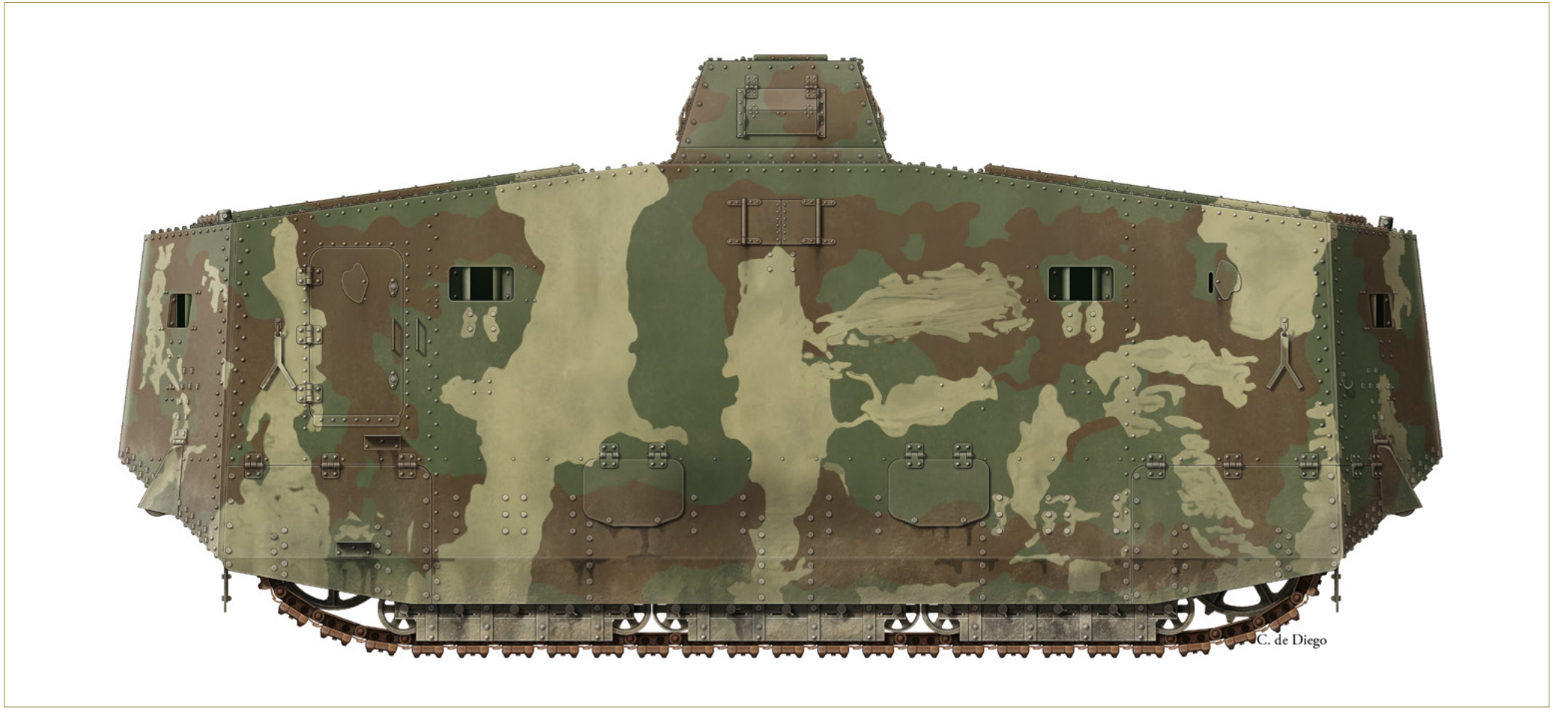
A7V-Geländewagen. Unit not identified. North of France or Belgium, 1918

The *Geländewagen*, all terrain vehicles also named *Überlandwagen*, were painted *Feldgrau*. This color was used by the Imperial German Army to paint the artillery pieces, light and heavy weapons, motor vehicles, carriages, and metallic pieces of the soldiers' campaign equipment. It was a greenish hue that could range from a dark olive green up to a light greenish grey, with so many variables within the range. The *Geländewagen* carried on the front and back of the chassis the number painted painted white.

Plus on both sides of the load box, usually the imperial eagle. These vehicles belonged to eight experimental transport units named *Armee-Kraftwagen-Kolonne (Raupe)* or Army Motor Vehicle Column (Crawler,) in short A.K.K.(R). Each one could have several models of vehicles intended transporting supplies and ammunition. The drawing represents the third vehicle of one of these columns, thus the number "3" painted in black inside a white ring on both sides, front and back of the box. This identification system varying in every column.



A7V-Sturmpanzerwagen 501. Marienfelde (Germany) - December 1917



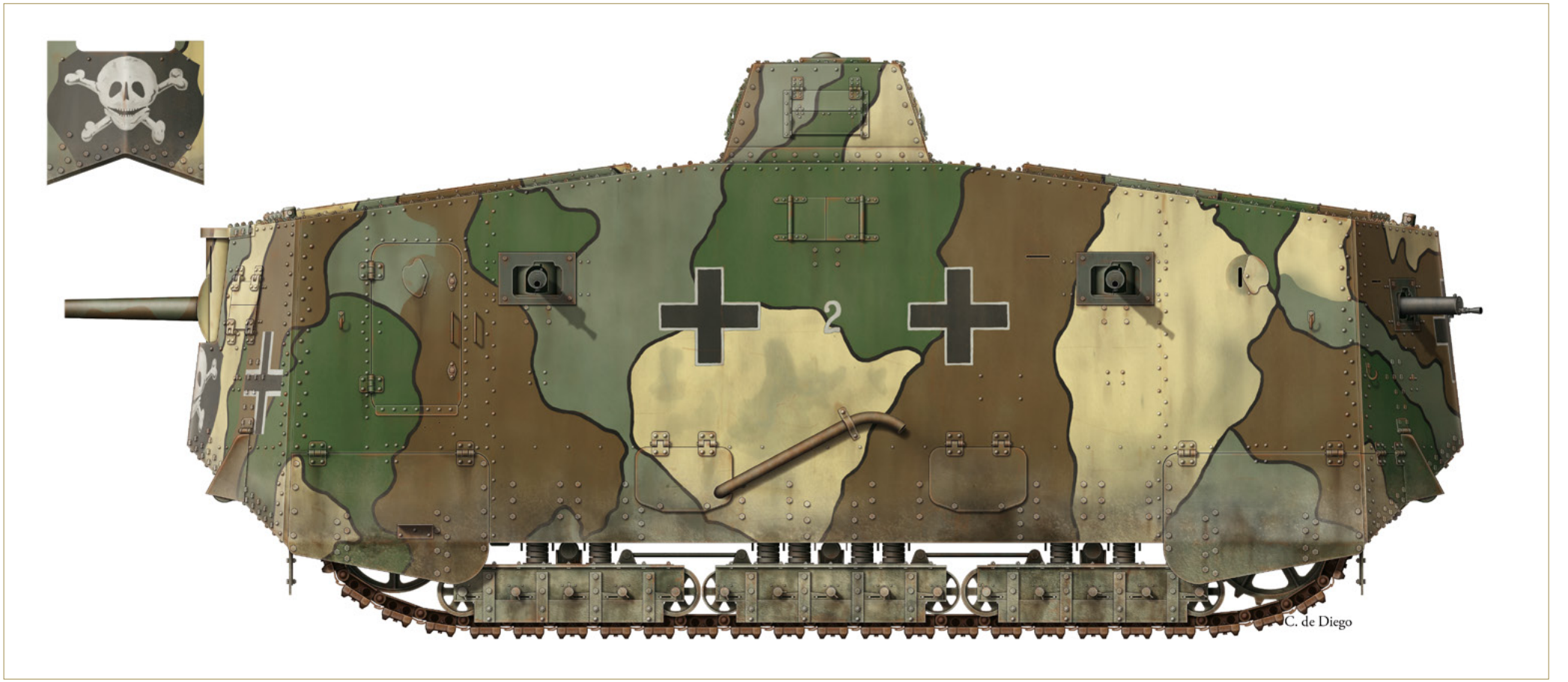
Left side view of the first *A7V Sturmpanzerwagen*. Manufactured at Daimler's Marienfelde, near Berlin. This tank, with steel plates made by Röchling, was the only one that entered combat armed with just machine guns. Its chassis number (501) was painted in white inside the doors and on the front and the back of the chassis, so it was concealed under the armor. The following tanks on the production line also carried the chassis number at the same locations. As one can see, the armor lacked exits for the exhaust pipes of the engines, so the smoke entered the combat chamber underneath the floor.

After the evaluation tests, this was corrected easily: a circular hole was made on the inspection hatch located over the muffler of the exhaust system on each side. Regarding camouflage, over the dark *Feldgrau* paint it had two shades big irregular spots painted with a brush, similar to the camouflage of the artillery pieces. Most likely the colors were *Ockre* (ocher) and *Braun* (brown) also named *Lehmgelb* (yellow mud) and *Rotbraun* (reddish brown). Besides the chassis number, this tank did not have any markings whatsoever.

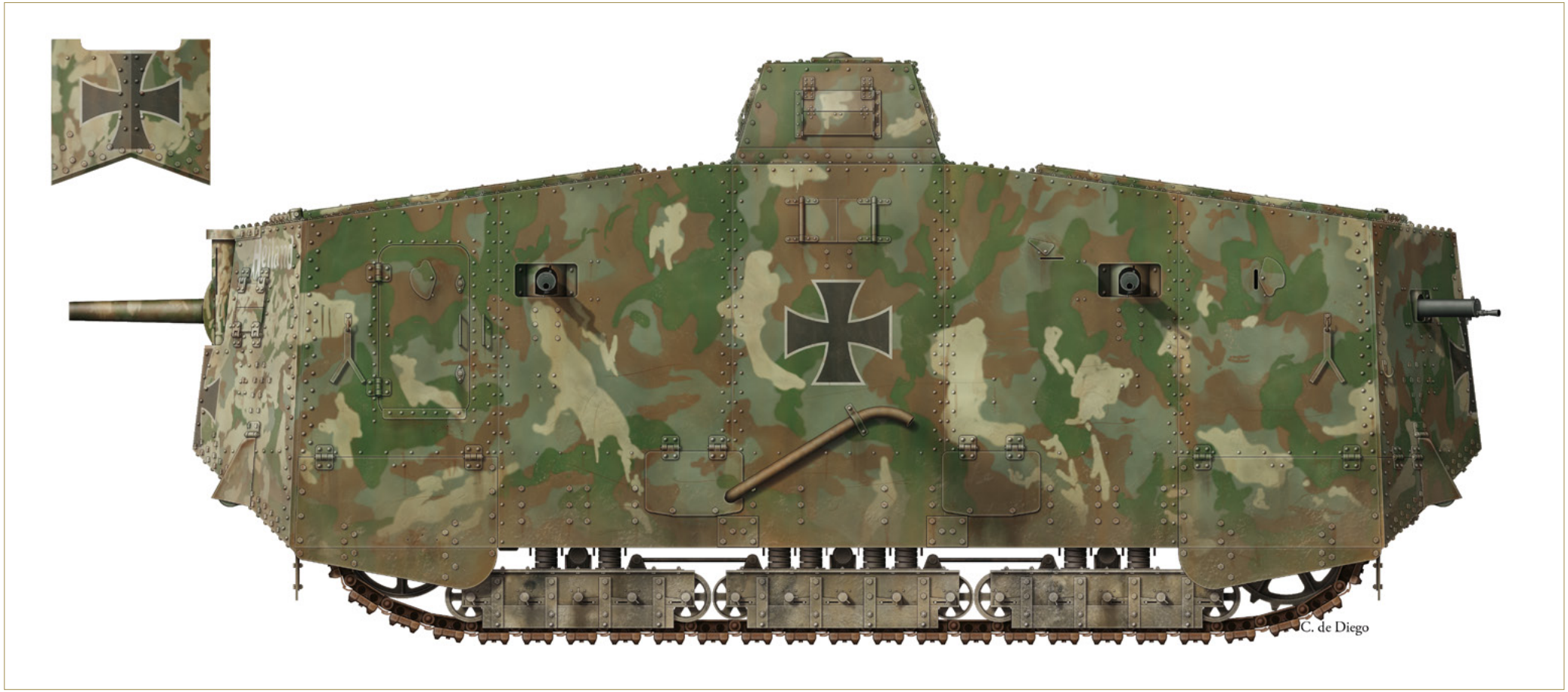
A7V-Sturmpanzerwagen 501 “Gretchen”. Stuka 1. Sainte-Cécile (Belgium) - October 1918

On February 1918 this tank was provided by the B.A.K.P. 20 with two curved exhaust pipes at the edge. Also, the central hinge of each access door and inspection hatch of the drive and idler wheels were removed. After serving under the Stuka 1 (where the central section of the bogies’ armor had been removed,) on mid April it was delivered to Stuka 3, and named “Gretchen.” Fifteen days later, it was sent to the B.A.K.P. 20 workshops to be overhauled. There, it was equipped with a 57 mm gun installed on a pedestal, while a semi-spherical support was added to the roof of the casemate in order to place a compass. Also, the semi-cylindrical shields of the machine guns were modified in order to stop shrapnel or bullets from entering the chamber (a few months later these were reinforced with additional armor plates).

In June it went back to Stuka 1, were it was assigned number “2” (second tank) and a skull with two cross bones was painted up front (badge of the detachment). In September the camo scheme *Buntfarben Anstrich* was introduced, made of large spots of different tones defined by fine lines of color *Schwarz* (black). A month later, the *Balkenkreuz* (straight cross) was established as the national emblem. The vehicle was painted according to the new regulation when its crew abandoned it during the last week of October, in the proximity of the Sainte-Cecile’s train station, location where it was dismantled once the Peace Agreement was signed.



A7V-Sturmpanzerwagen 503 “Heiland”. Stuka 3. St. Etienne (France) - October 7, 1918



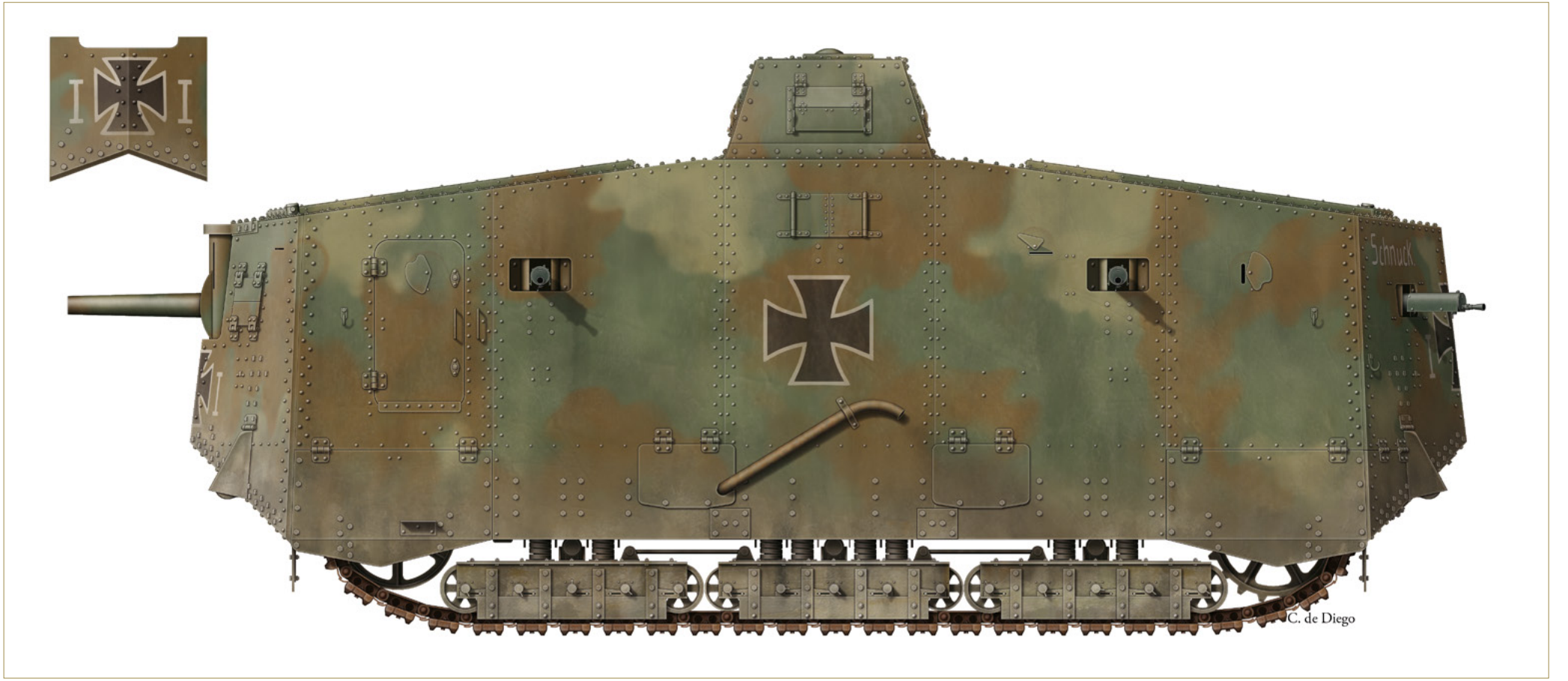
Five of the ten *A7V* of the first lot were armored with steel plates made by Krupp. These vehicles (503, 504, 541, 542, and 543) could be identified by the numerous plates of their armor (five per side, two up front, and two on the rear) and by the numerous rivets. Number 503, sent to Stuka 3 on early April 1918, was named “Faust,” and a few weeks later renamed “Kronprinz Wilhelm” or “König Wilhelm,” ending up with just “Wilhelm” in June. Two months later, the name was changed again, for the last time, to “Heiland.” The name was painted white on the front left and back right corners of the armor. The name changes were habitual at Stuka 3. The camos were also renewed frequently, although this was a common practice of all detachments.

It looks like primers to ensure a good binding of the paint were not in use at the time, so when tanks went into the workshop, they were repainted totally or partially. The drawing shows the last camo painted on this tank. The national emblem is painted on the front, on the back, and at both sides of the hull and on both large ventilation grids placed on the roof. A characteristic of the Stuka 3: its tanks only carried one cross on each side. On the last week of October 1918, the three detachments with *A7V* tanks were grouped into a single unit. One week later, the men and the vehicles of the new unit, and probably among these tank 503, were transferred to a base at Erbenhein, a German village near Wiesbaden.

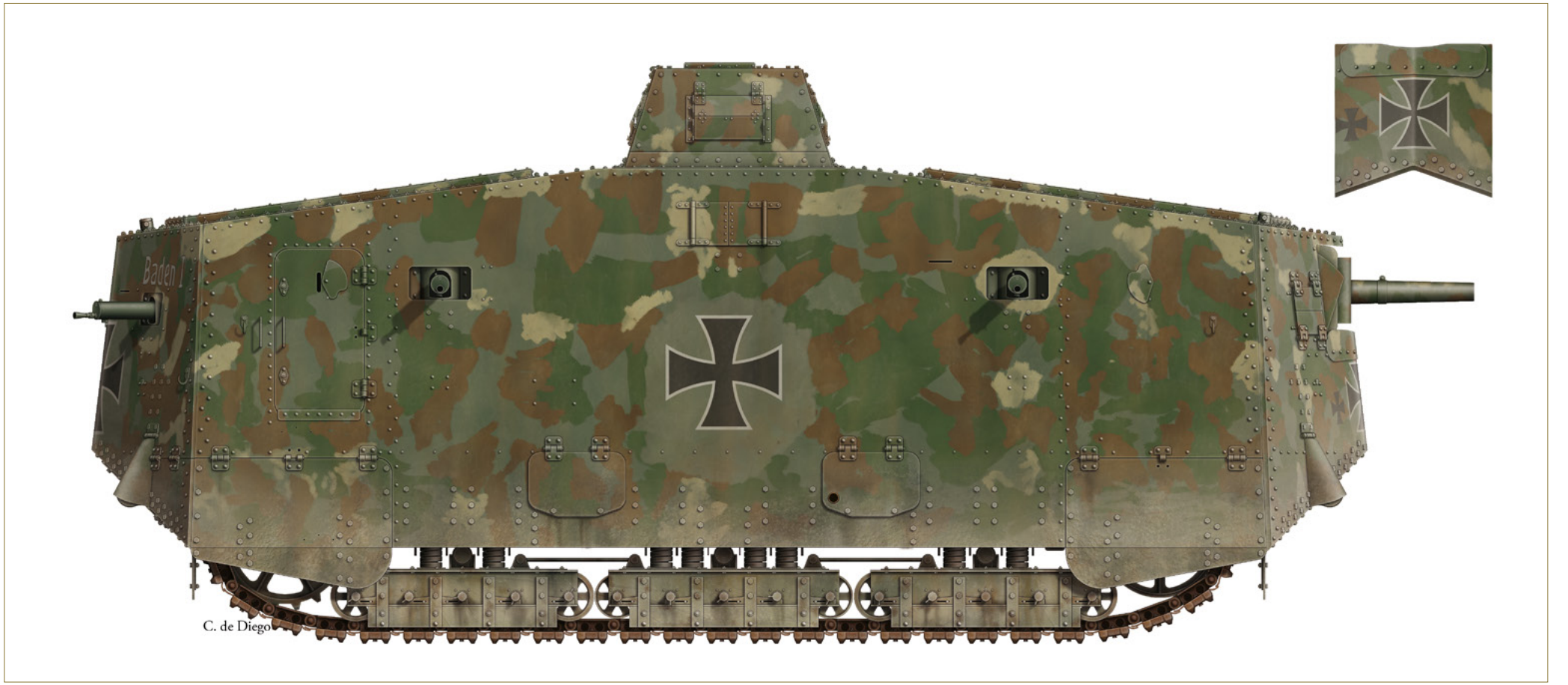
A7V-Sturmpanzerwagen 504 “Schnuck”. Stuka 2. Villers-Bretonneux (France) - April 1918

This *A7V Sturmpanzerwagen* with chassis number 504 was a unit in the first lot manufactured by Krupp. In early April 1918 it was delivered to Stuka 2, where it was named “Schnuck” and was assigned the formation number “I.” At the detachment, the armor plate of the central part of the bogies was removed from each side the armor, since on that area lots of mud would accumulate. Also, men removed the inspection hatches of the down left corner for the idler and drive wheels with a straight cut very characteristic of Stuka 2. After the battle of Villers-Bretonneux, the machine guns shields were modified. Lately, the lower edge of the apertures were lowered to allow for a greater shooting angle, and between the shields and the armor additional armor was placed.

The plates that were removed from the bogies were used to reinforce the walls of the casemate. On August 31, during the counterattack at Frèmincourt, the tank was hit up front by “friendly fire.” The rounds did not pierce the armor, but the engines overheated and stopped working, thus the crew had no alternative but to abandon the tank. Three days later, a New Zealand division captured the tank. Shipped to the UK, it was put on display in London and later on it was dismantled. The gun along with the shield and the pedestal are kept at the Imperial War Museum in Manchester (UK).



A7V-Sturmpanzerwagen 505 “Baden I”. Stuka 3. Marchienne-au-Pont (Belgium) - May 1918



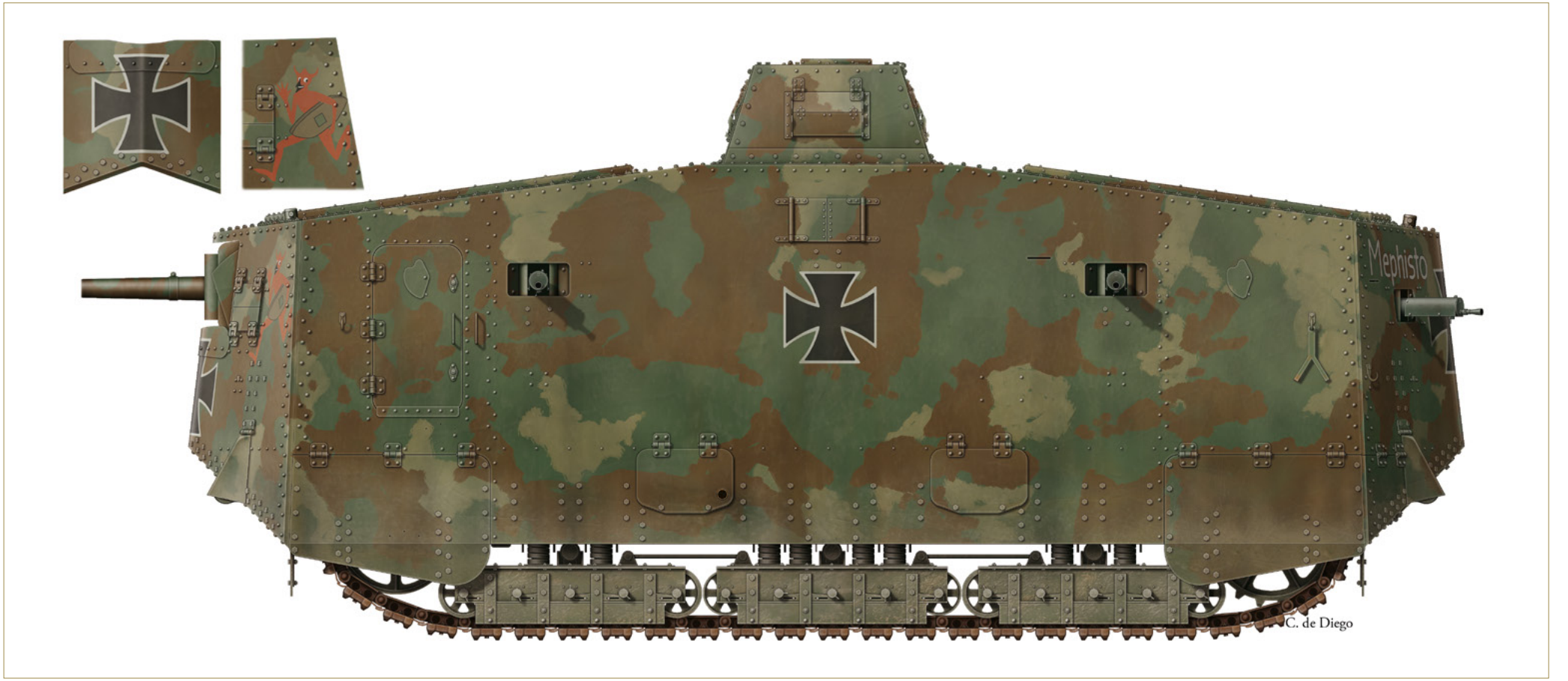
This tank of the first lot with armor made by Röchling was one of the first *A7V* assigned to Stuka 1. At the detachment, the central section of the armor of the running gear was removed, the lower left corner of the hatches for the inspection of the idler and drive wheels were cut (with a curved shape characteristic of this unit,) and one of the wings of the central hinge of the aforementioned hatches and access doors was removed. Also, the men opened slot shaped sight holes next to some machine gun apertures. After going through the B.A.K.P. 20 workshops for a mechanical checkout, before the battle of Villers-Bretonneux, it was sent to Stuka 3 and named “Braden I”. The drawing depicts the look it had after the battle, with a new camo and with the machine gun shields modified in such a way that it was very difficult for bullets or shrapnel to make their way in.

Over the Feldgrau paint, it had spots of *Lehmgelb, Rotbraun,* and *Grün*. The name “Baden I” (painted on the front left and back right corners of the armor) was changed later to “Prinz August Wilhelm”. Nevertheless, after an order issued on May 25, 1918, that forbade references to imperial prices, the name became just “August Wilhelm”. One of the particularities of this tank was that the four tow hook guards were not bended at an angle, but they were curved, as depicted in the drawing. The casemate and the barrel’s base were kept the same, with no modifications.

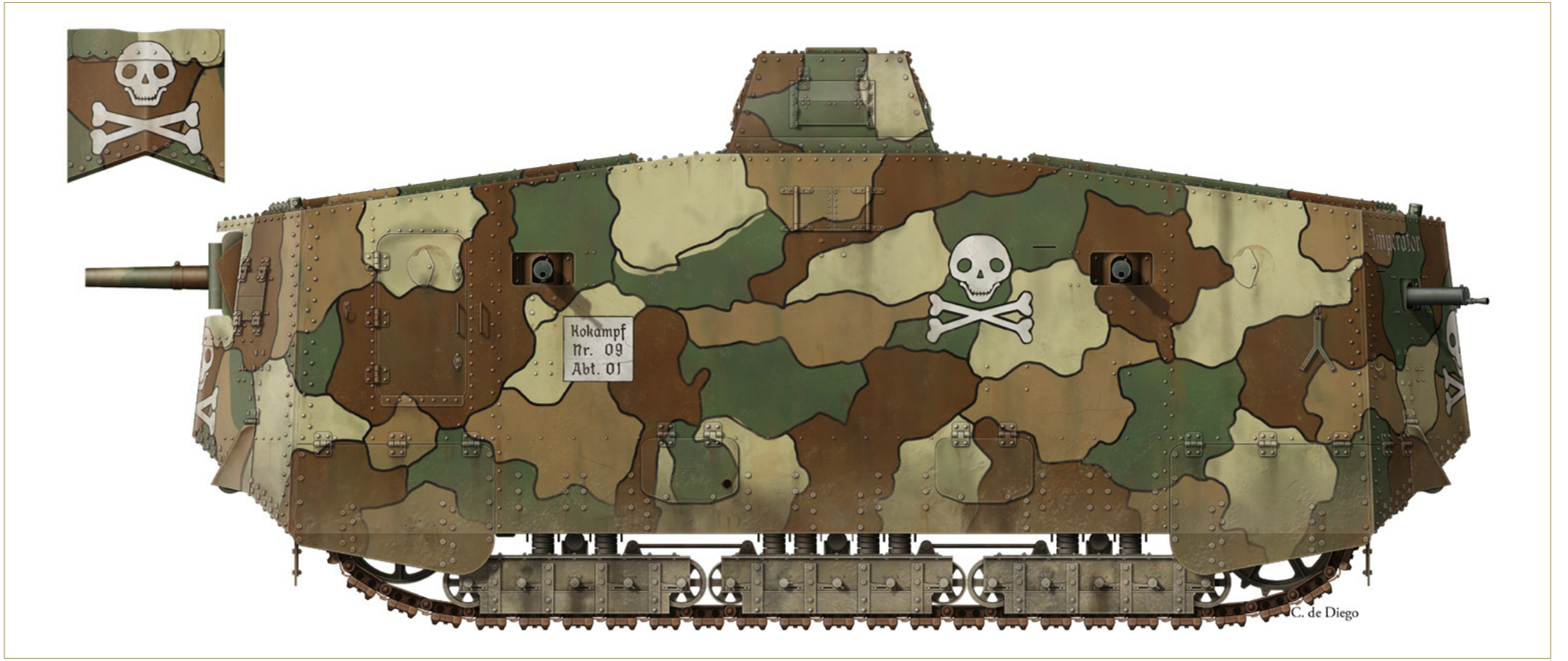
A7V-Sturmpanzerwagen 506 “Mephisto”. Stuka 3, Marchienne-au-Pont (Belgium) - April 1918

Another *A7V* sent to Stuka 1 between December 1917 and January 1918 was number 506, a tank of the first lot with armor by Röchling. The detachment performed the usual modifications: the central section of the running gear armor was removed and the lower left corner of the inspection hatches were cut in a curved shape. By the end of March it was sent to the workshop for servicing and two weeks later, when it was ready, it was delivered to Stuka 3, where it was named “Mephisto.” The name was painted on the upper right corner of the front and the upper left corner of the back. Also, next to the cover of the frontal left aperture a devil was painted running with a British tank under its arm. On April 24, during the battle of Villers-Bretonneux, the tank became trapped in one of the numerous funnels made by the artillery bombshells on the ground.

Thus, it had to be abandoned and even if it was behind the German line, due to the enemy’s fire, it became impossible to recover it. During the intense combats that took place, it was used as a bunker by the German troops. It was hit by an artillery round that pierced through the roof and exploded inside the vehicle’s front combat chamber, seriously damaging the inside of the vehicle. Finally, during the night of June 22, 1918, Australian troops removed the vehicle from the battlefield. This is the only existing *AV7,* on display at the *Queensland Museum and Cultural Centre* of South Bank (Brisbane, Australia).



A7V-Sturmpanzerwagen 507 “Imperator”. Kokampf. Lankwitz (Germany) - January 1919



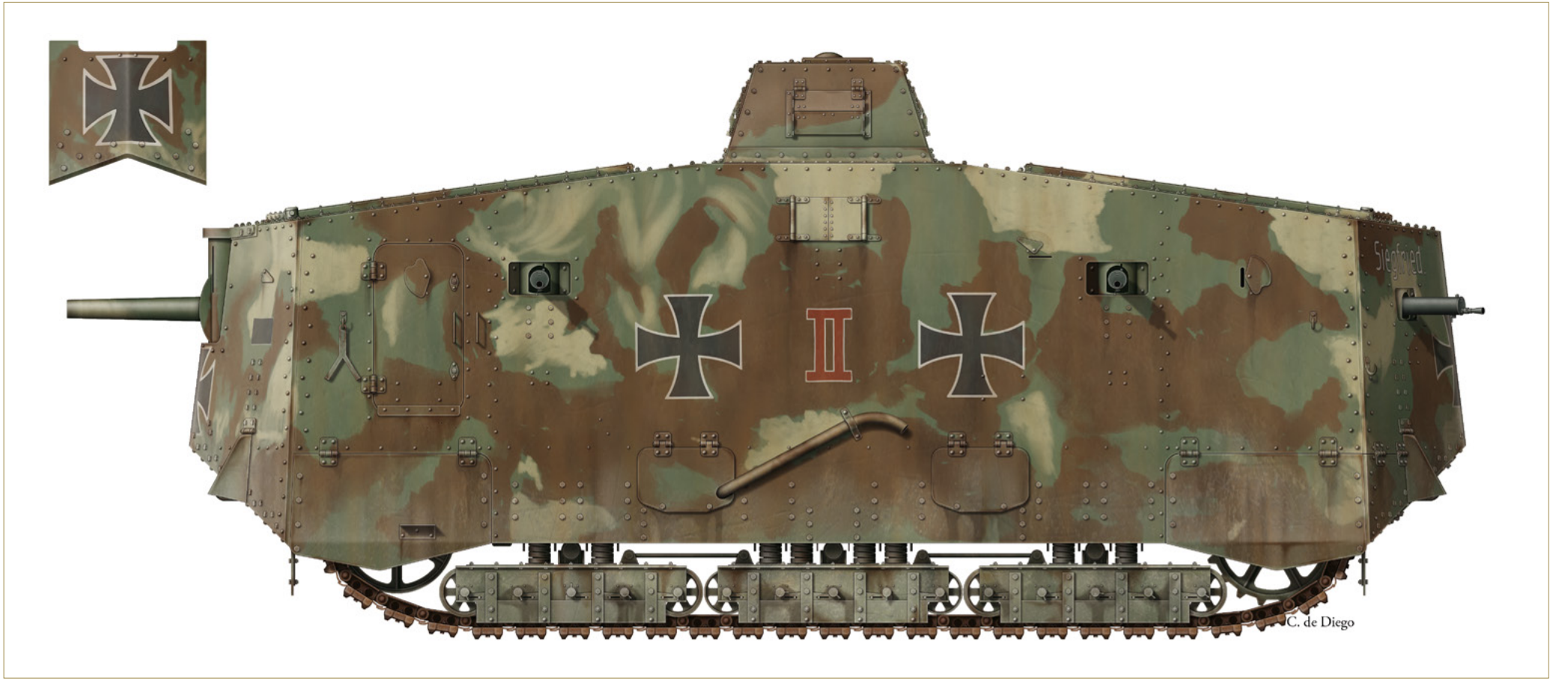
The *A7V* 507 was assigned to Stuka 1 between late 1917 and early 1918. This unit removed the central plate of the suspension armor and the lower left corner of the inspection hatches as the drive and idler wheels were cut in a curved shape. By mid-April it was delivered to Stuka 3, where it was named “Ciklop.” In May, the machine gun shields were modified, and a month later it was renamed “Prince Eitel Friedrich,” that was shortened to “Eitel Friedrich.” In August, Stuka 3 moved to Saarburg (Germany) and the tank took active part in training exercises until early October. Then, it broke down and had to be transported to the Daimler factory to be repaired. After the war, when the revolution began in Germany in early 1919, in Lankwitz (Berlin,) the *Kampfwagen-Abteilung Körting* (Detachment of Armored Vehicles Körting) was established, soon to be renamed *Kommando der Kampfwagen-Abteilungen (Kokampf) (Command of the Armored Detachment).*

Among the armored vehicles under this command there was an *A7V* that most likely was the 507, although the 505 had an identical configuration. Named “Imperator,” the *A7V* from Kokampf had a camo scheme *Buntfarben Anstrich*, probably made of color spots of *Feldgrau*, *Braun* and *Ocker* (light and dark) outlined in black. The four sides of the tank had a skull with the crossed bones, one of the symbols more characteristics of the Freikorps. Also, inside white squares located on both sides of the vehicle, the name “Kokampf” was written, and below, the number of the vehicle (Nr. 9), and the detachment (Abt. 1).

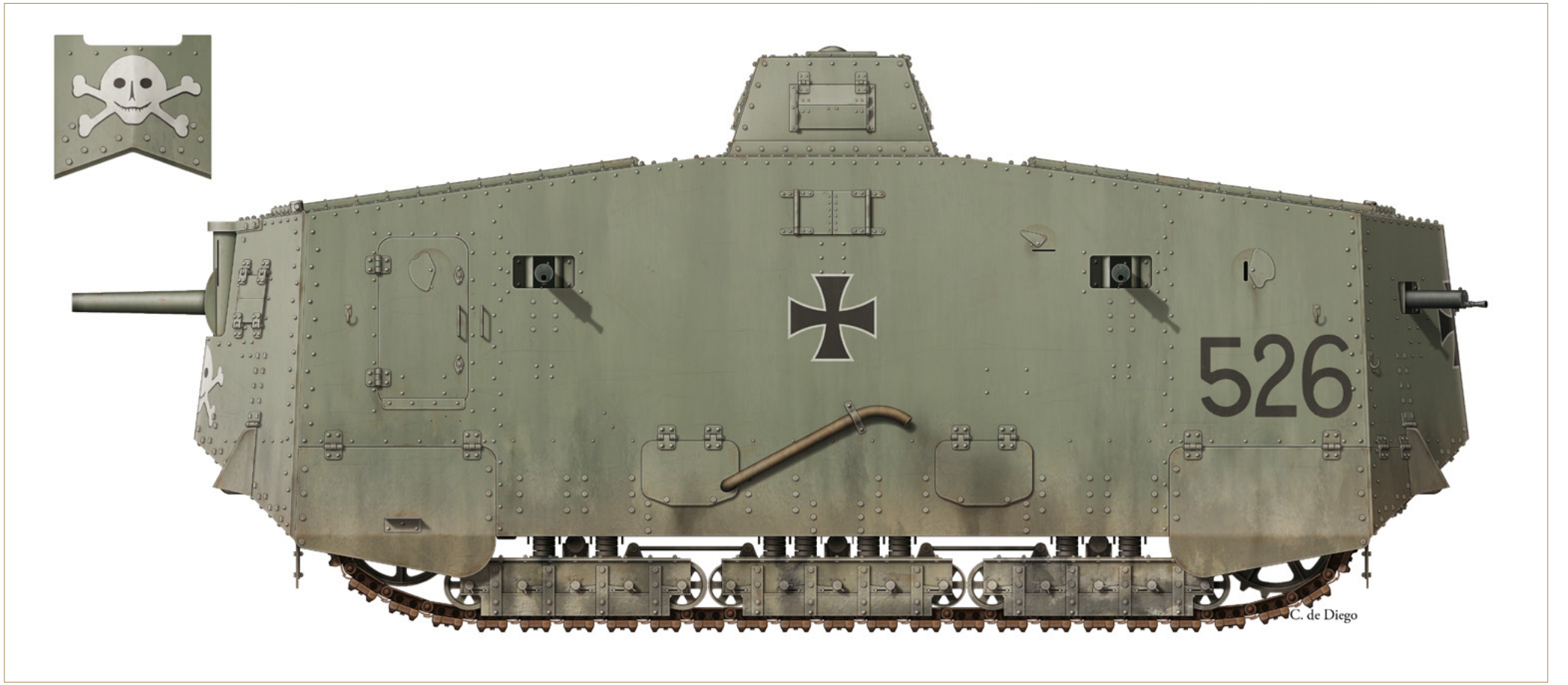
A7V-Sturmpanzerwagen 525 “Siegfried”. Stuka 2. North of Reims (France) - May 31, 1918

The *A7V Sturmpanzerwagen* with chassis number 525 (belongs to the second production lot) was assigned to Stuka 2 on April 1918. The front armor plate was of one piece, without apertures on both sides of the barrel (see *A7V* 540,) so small slots were opened (type peephole) protected by triangular flaps. As usual, the bogies’ armor plate was removed. On the upper right of the front and left of the rear the name “Siegfried” was written. Each tank of the Stuka 2 had a roman numeral that identified its position in the formation. At first, these numbers (I to V) were painted white on both sides of the front and back crosses. Nevertheless, before the end of May, the numbers were erased and painted on the center of the lateral armor plates, but in red (outlined in white,) color assigned to the Stuka 2.

To confuse the enemy’s riflemen and to divert the enemy’s fire, the crew painted in both sides of the frontal plate fake apertures: black rectangles outlined in a thin light color. This vehicle, that according to its crew knocked out three British tanks at the battle of Villers-Bretonneux, saw its final action on 11th October near Iwuy. Previously, it had got installed additional armor plates at the machine gun apertures and on the walls of the casemate. It is presumed that by early November it was evacuated along with other *A7V* to a base at Erbenheim and it was scraped once the Peace Agreement was signed.



A7V-Sturmpanzerwagen 526 “Alter Fritz”. Stuka 1. Versigny (France) – April 8, 1918



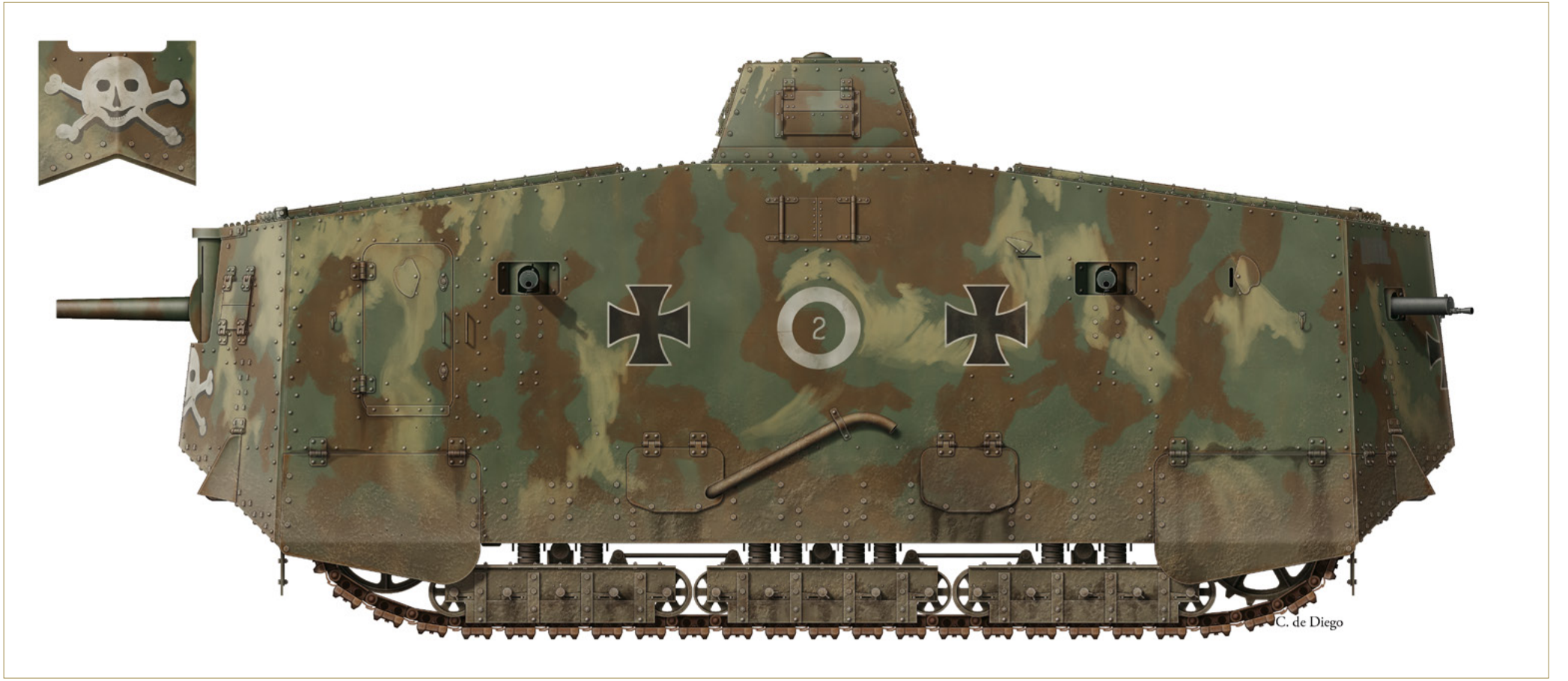
After the fights of March 21, 1918, all the tanks of first production lot assigned to Stuka 1 (chassis numbers 501, 505, 506, 507, and 540) were sent to the B.A.K.P. 20 for inspection. At the beginning of April, the inspection still had not finished, so it was decided to equip the unit with the tanks from Stuka 3, a unit which was still in its reorganisation period. Those tanks (526, 527, 541, 560, and 562) belonged to the second production lot. The drawing shows *A7V Sturmpanzerwagen* 526 with one color paint. Color *Feldgrau* had a lighter hue than the first lot tanks. The soldiers of Stuka 1 removed the central section of the armor of the bogies and cut the lower corners of the access hatches to the drive and idler wheels.

The chassis number, that was painted under the doors, was painted black now, some large numbers on the rear left side and on the front right side, just over the inspection hatches of the drive and idler wheels. The rear had a skull and cross bones painted, which was the emblem of the unit. Before the battles on April 24, the tanks of the detachment were camouflaged with spots of color *Lehmgelb* and *Rotbraun* (some also with Grün too,) which hid the large black numbers. After participating in an operation in the East of Reims on June 1, *AV7* 526 did not enter combat again. It looks like its bits were used as spare parts for some other tanks.

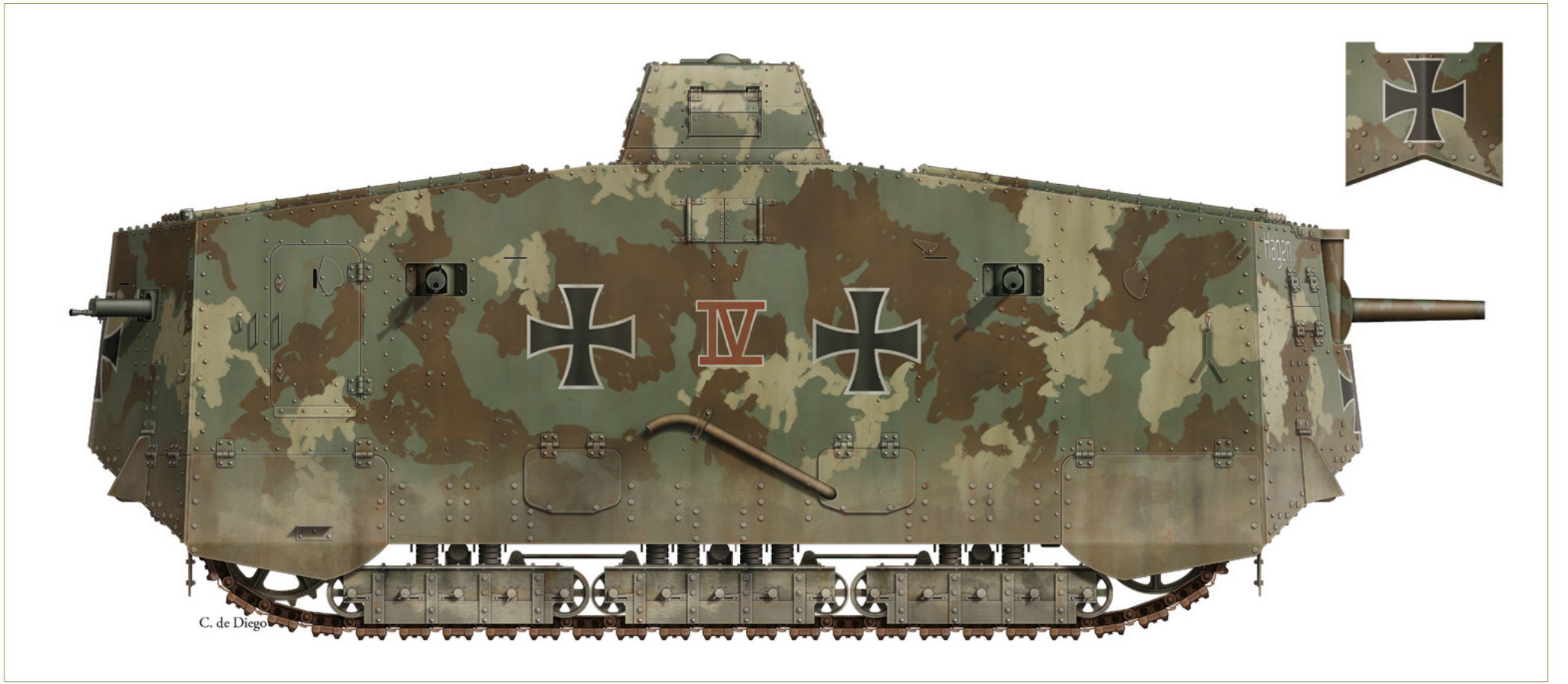
A7V-Sturmpanzerwagen 527 “Lotti”. Stuka 1.East of Reims (France) – June 1, 1918

This is one of the *A7V* that arrived at the B.A.K.P. 20 workshops in March 1918. Although it was assigned to Stuka 3, it was reassigned to Stuka 1 in April. It was a tank from the second production lot. To prevent mud to build up, the detachment modified the lower lateral armor. It was named “Lotti,” and the name was painted on the upper front and on upper rear plates. It also had a skull up front and the chassis number was painted over the right idler wheel and left drive wheel inspection hatches. In April it was camouflaged with irregular spots, Ocker and Brown painted with a brush onto the factory *Feldgrau* (if not in its totality, at least partially).

This probably took place during a mechanical inspection at the B.A.K.P. 20, when the machine gun shields were replaced by others that lowered the risk of shrapnel entering the combat chamber. In May, Stuka 1 adopted the numerical system employed by the detachments equipped with captured tanks. This system consisted of a ring with the number matching to the position of the tank in the formation, and in this case white since it belonged to the first detachment. On this date the camo pattern was repainted and the name erased. On June 1, during the combats at Reims, the tank became stuck in a trench and hit at the casemate by an artillery shell. It looks like the French dismantled it in 1921.



A7V-Sturmpanzerwagen 528 “Hagen”. Stuka 2. Frèmicourt (France) – August 31, 1918



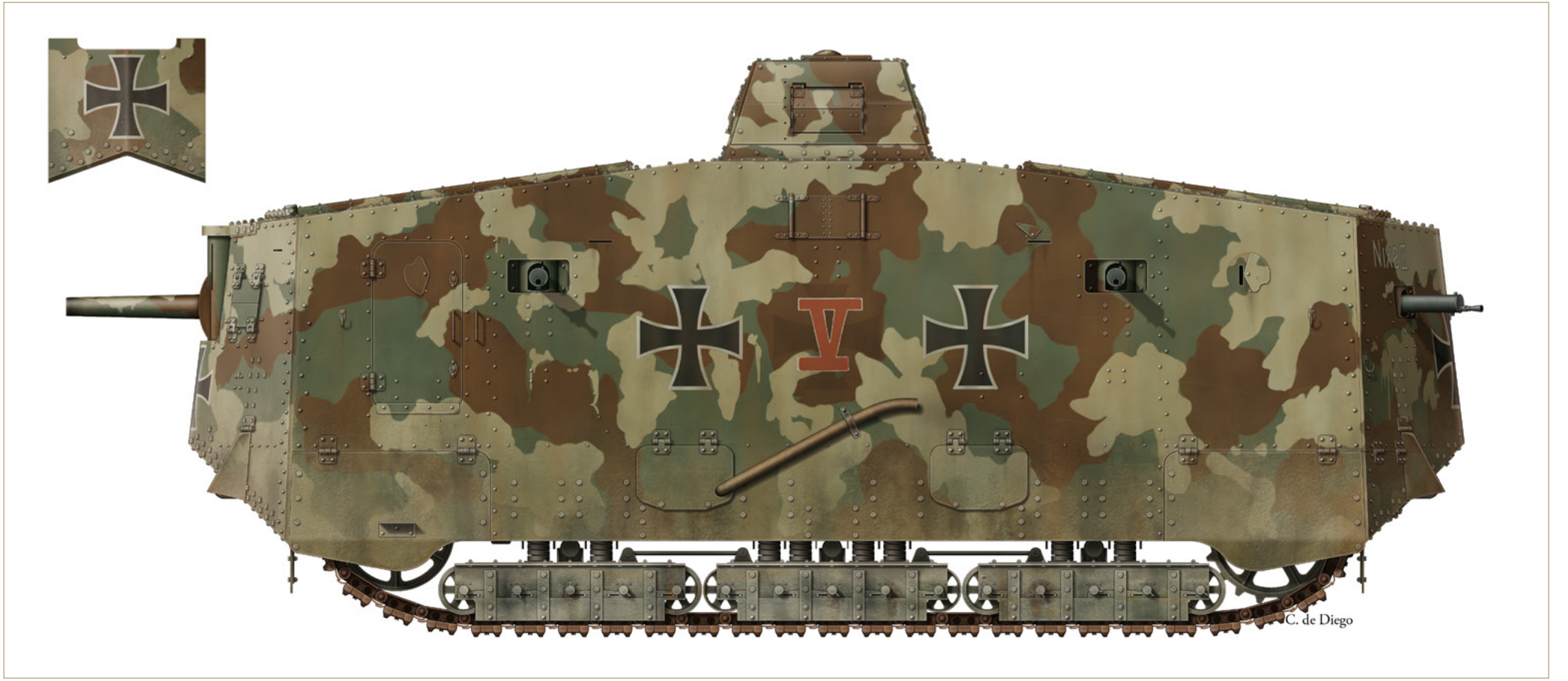
This *A7V* of the second lot was delivered to Stuka 2 in early May 1918. Assigned to replace *A7V* 543, that was at the workshop, it was assigned the same formation number (IV). The armor plates of the suspension were removed and the lower sharp corner in the drive and idler wheels’ hatches were cut in a curved shape. The removed armor was used to reinforce the armoring of the casemate. There were two footboards under each door, the top one was removed, a usual practice performed to all tanks. Also, peepholes in slot shape were opened next to some of the apertures up front and on the rear, plus a second one on each side of the hull.

It was named “Hagen.” The name was painted on the top right front and left rear of the tank. Eight crosses were painted too two on each side of the hull, one up front, another one on the back, and one on each ventilation grilles on the roof. The camouflage consisted of spots painted *Ocker* and *Braun* applied with a brush onto the original *Feldgrau*. On August 31, when the detachment took active part at a counterattack in Frèmincourt, Stuka 2 had only two working tanks: 528 and 504. At this battle, the 504 one was hit by “friendly fire” while the 528 became stuck in a ditch. On September 3, both tanks were captured by a New Zealand division. After been shipped to the UK, they were put on display in London and later on they were scrapped.

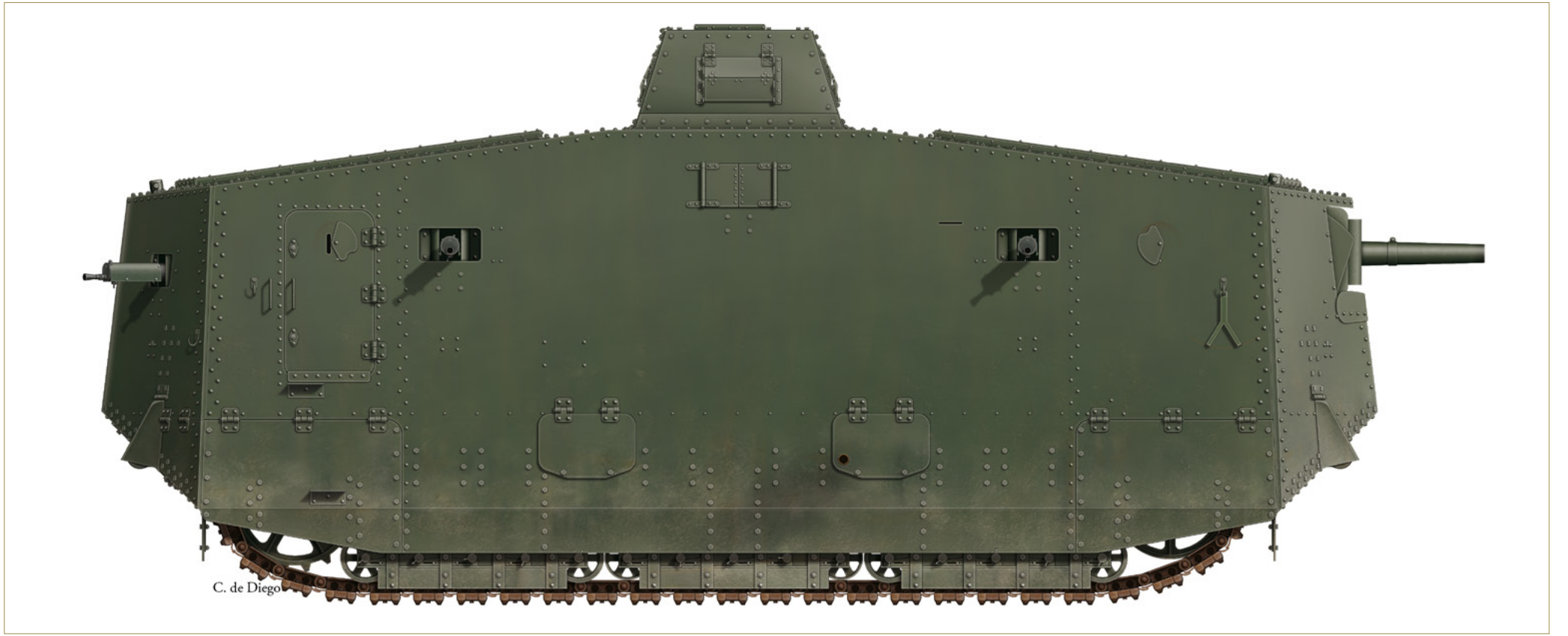
A7V-Sturmpanzerwagen 529 “Nixe II”. Stuka 2. North of Reims (France) – May 1918

Stuka 2 received this tank in early May 1918. It was a replacement of the fifth tank from the detachment (561 “Nixe”) that had been destroyed with explosive charges during the night of April 24, so it received the same numbering. It was a second lot tank, but with a first lot front armor plate. All the modifications made to the *A7V* 528 “Hagen” were also made to this tank, 529, named “Nixe II.” It stands out that on both vehicles the hatches to access both the front and the back wheels were not cut at a straight line (as usually performed by Stuka 2) but at a soft curve shape. In any case, the Surface cut to the 529’s hatches was bigger.

The *A7V* “Nixe II” was camouflaged with large spots color *Rotbraun* and *Lehmgelb* painted with a brush over the *Feldgrau* coating. At first the formation number “V” was painted in white on both sides of the front and rear crosses. Later on, the number was removed from its original locations and painted red with white outline on the center of the lateral plates, just on top of the old cross (now repainted). At this time, new crosses were added on both sides of the number. On May 31, Stuka 2 entered combat in the north of Reims, where the tank was hit by several 75 mm shells. Three crew members died, others were injured, and the vehicle was abandoned. Captured by the French, in July 1919 it was delivered to the U.S. Army. It was on display at the testing grounds in Aberdeen (Maryland). In 1942 it was scrapped.



A7V-Sturmpanzerwagen 540. Stuka 1. Doncourt Camp (France) – February 1918



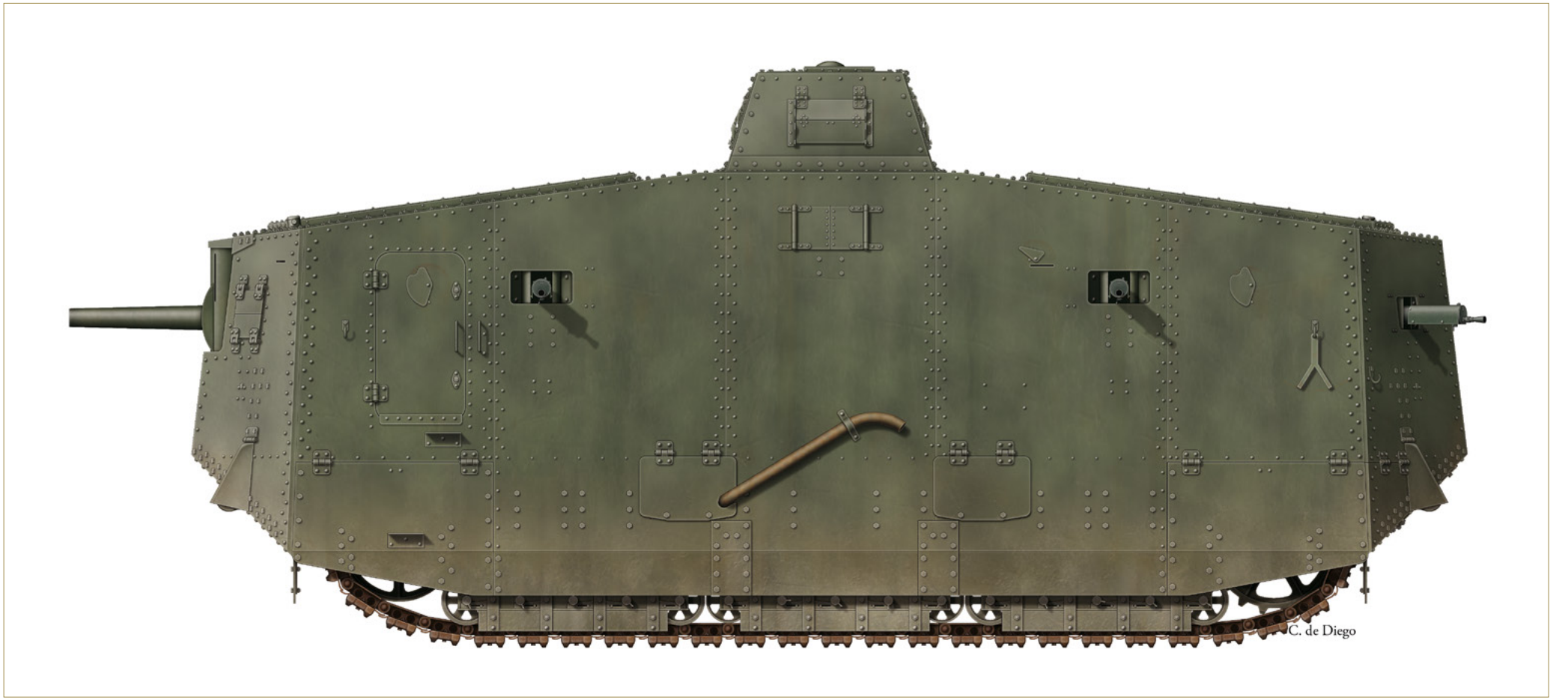
After January 1917, when the companies Röchling and Krupp were awarded the contract to manufacture the armor plates of the ten vehicles of the first lot, it was planned for one of every five to be armed with a gun up front and the other ones with machine guns. This was the reason why two frontal plates were ordered, each one made of two parts without the rectangular openings for the machine guns but with an opening for the gun and its shield. When in May the armor was ordered to Röchling for the ten tanks of the second lot, only eight frontal plates (each one of one piece) were planned for production since there were going to be two left over from the first lot. At the end, in December, it was decided that all *A7V* would carry a gun, so sixteen frontal plates were modified since the original plan was to carry only machine guns. A hole was opened for the gun and the apertures of the machine guns were protected with folding lids.

Pictured in the drawing, the *A7V* 540 of Stuka 1, a tank of the first lot with armor made by Röchling in its original configuration, with the gun base mounted on a base stand. The right side of the front carried the armor specific for tanks armed with a barrel (without openings for the machine guns) and on the left an aperture covered with two folding lids. In April 1918, this tank was sent to the Daimler plant in Marienfelde for a thorough restructuration that equated it to the Krupp tanks of the first lot and the Röchling ones of the second lot. Regarding the main weapon, the mount was replaced by a pedestal type one. Also, it was given a new shield, a firing electric control system, and a guidance gauge. The casemate on the roof was also improved and the machine gun apertures were modified. In July it was sent to its unit.

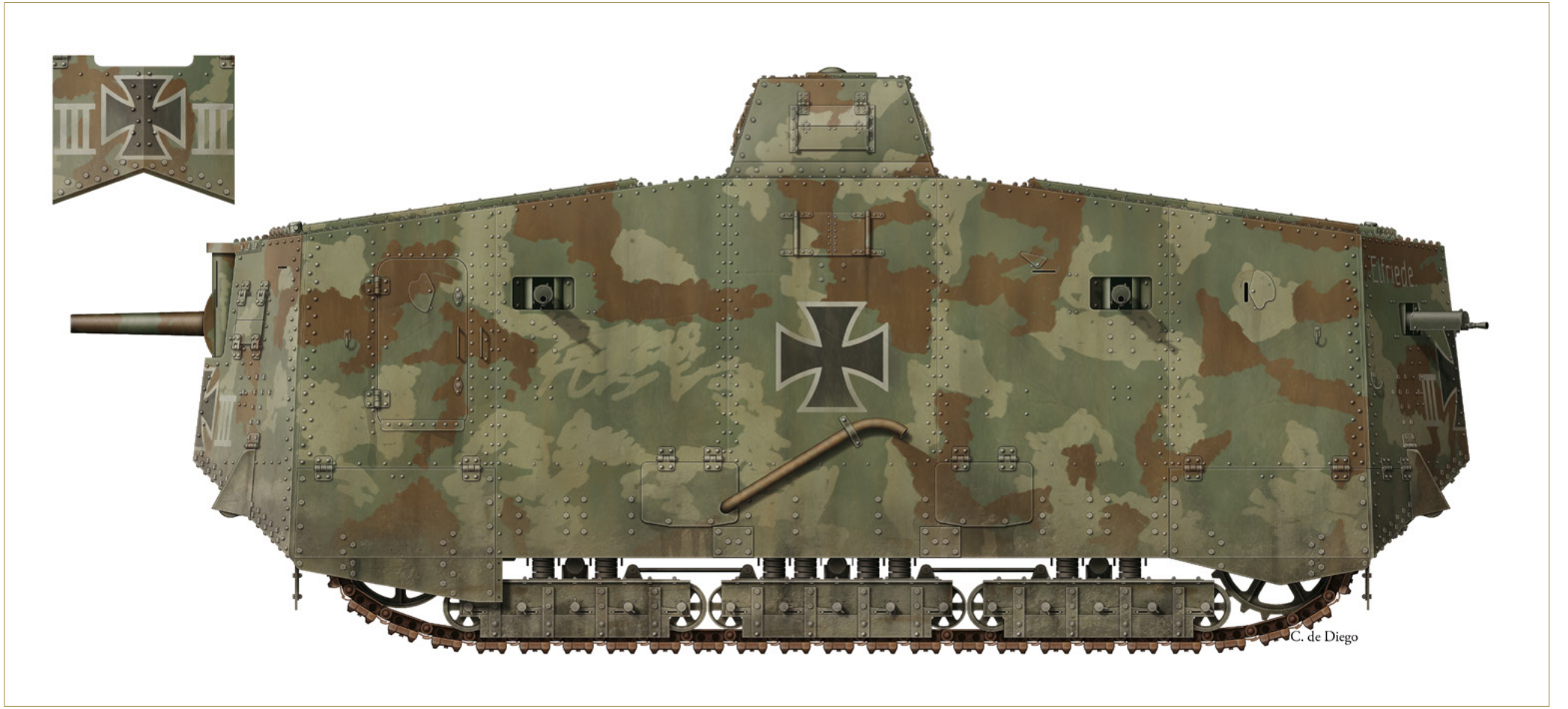
A7V-Sturmpanzerwagen 541. Stuka 1. Monceau-sur-Sambre (Belgium) – April 1918

This Illustration depicts the look of a tank of the first lot with armor manufactured by Krupp as it was delivered to Stuka 1 by the B.A.K.P. 20, precisely on April 2, 1918. The armor plate that protects the lower portion of the vehicle is intact and the suspension springs are still covered. It is the *A7V* with chassis number 541, easily identified by the shape of the reinforcement piece located at both sides of the upper edge of the barrel's shield which lacked the strip used as a bracket. Looking at the machine guns one can clearly identify the first type of armored hull, with an inverted "U" shaped section. Another interesting detail is the existence of four openings covered with rivets for a third hinge at the access doors.

As well, between both hinges of each access hatch of the front and back wheels, there were two openings (also covered,) for the lower half of a third hinge. When in May the detachment adopted the identification system by a number inside a ring painted on both sides of the armor, the *A7V* 541 was assigned number "3." The engines of the tank suffered numerous failures during the following months, so it did not participate in all combat actions where the detachment was involved. Supposedly, at the beginning of November it was sent to the base at Erbenheim (Germany) and after the war it was dismantled.



A7V-Sturmpanzerwagen 542 “Elfriede”. Stuka 2. Villers-Bretonneux (France) – April 1918



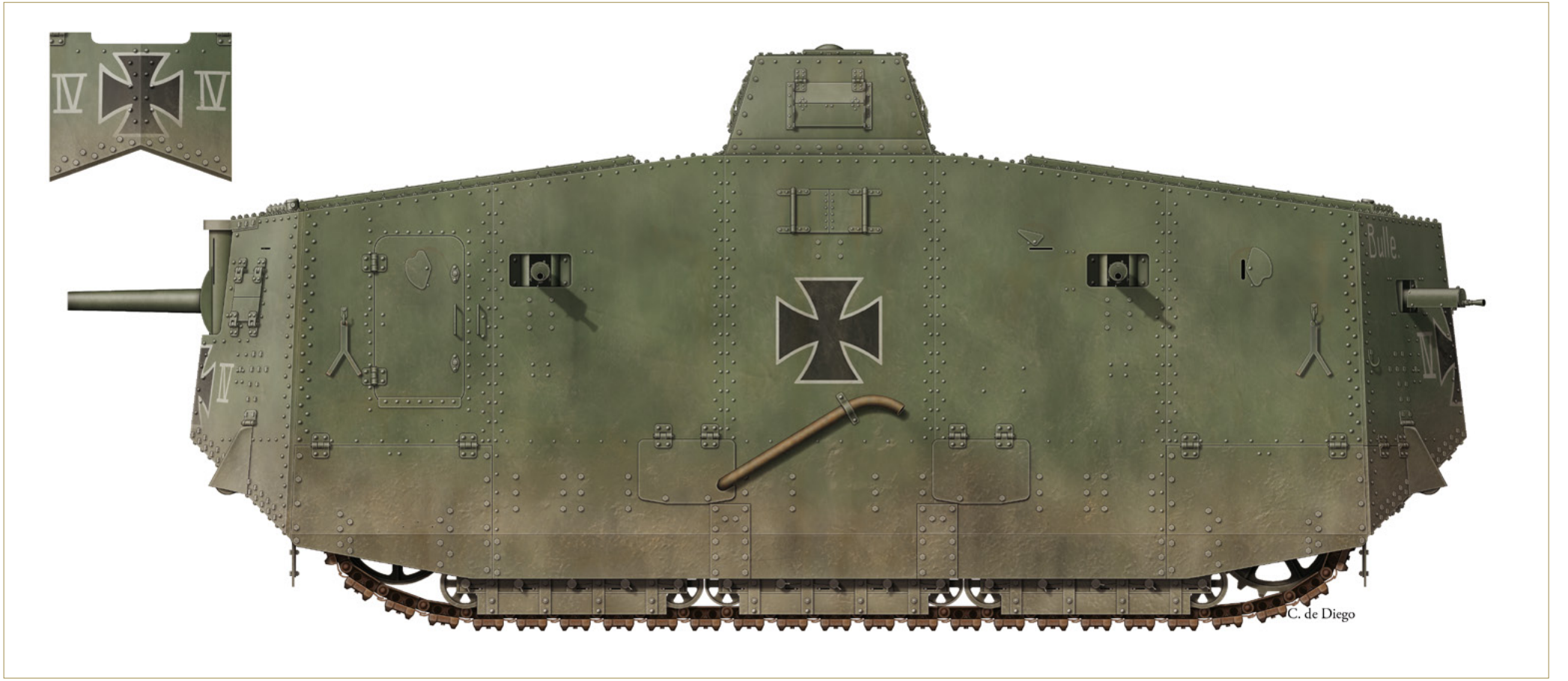
This tank 542, is another one of the first lot with armoring by Krupp. It was delivered to Stuka 2 at the beginning of April 1918. When it fought at the battle of Villers-Bretonneux, the central armored plate that protected the running gear was already removed, but the inspection hatches of the front and back wheels were still uncut. The camo pattern was made of spots *Lehmgelb* and *Rotbraun* painted with a brush in a random way over the factory *Feldgrau*. Its name, “Elfriede,” appeared on the front upper right and on the rear upper left. The front and back crosses where between the formation number “III” in white color.

On April 24, during the battle of Villers-Bretonneux, the *A7V* 542 skidded on a sandbar and tipped over its right side, so its crew reorganized as a storm formation *(Stosstrupp)* and fought outside the vehicle. In the pictures taken at a later date, one can see a large Iron Cross painted on each of the vent grilles on the roof. On May 15 “Elfriede” was recovered by French troops that verified that it still worked. After being displayed in the South of Amiens, it was used as a target during ballistic tests with light weapons. In October it was sent to Paris and was displayed at the Place de la Concorde. Likely it was scraped in 1919.

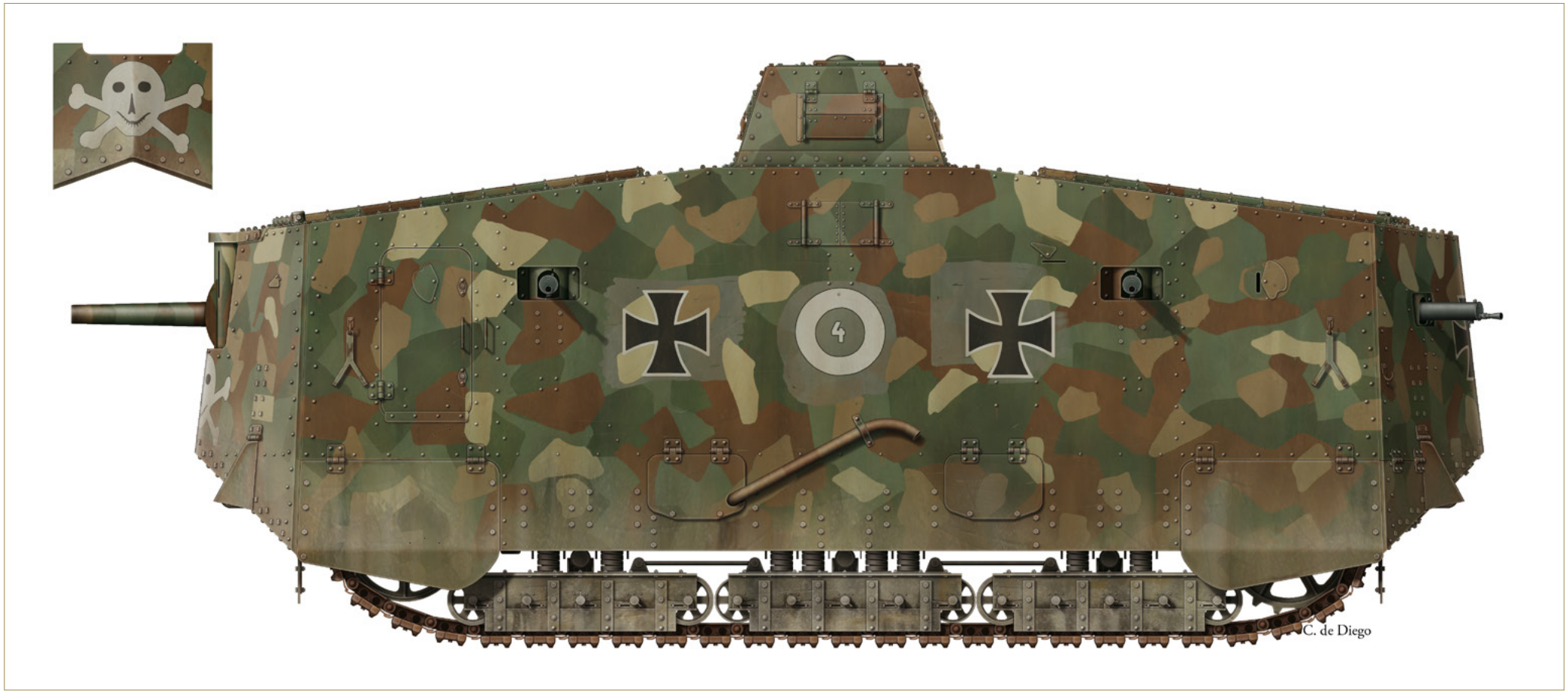
A7V-Sturmpanzerwagen 543 “Bulle”. Stuka 2. Marchienne-au-Pont (Belgium) – April 1918

This tank from the first lot with armor by Krupp was delivered to Stuka 2 on April 1918. It was assigned the fourth place in the formation, it had painted number “IV” on each side of the front crosses. Its name was “Bulle,” and it wore it on the upper corner of the forward right plate and on the upper side of the left rear plate. Next to the front left aperture and the two rear ones, small slots to look out were opened. The drawing represents the look of the tank before it suffered a mechanical breakdown that sent it back to the B.A.K.P. 20. In early May, once repaired, it was delivered to Stuka 3 in order to replace *A7V* 501, since this last one had been shipped to Monceau-sur-Sambre in order to be equipped with a 57 mm gun. After modifying the armor of the running gear for this to be alike the other tanks in the detachment, camo spots of *Lehmgelb* and *Rotbraun* were painted.

At the beginning of June it was named “Prinz Adalbert.” The entire name was painted by the side of the front and back crosses. This was the usual placement of the tank names at Stuka 3. As we have already mentioned, on May 25 the references to the Imperial Princes were forbidden, so the name became just “Adalbert,” this word appeared in both sides of the crosses. In November it was shipped to the new base of the assault detachment vehicles (merged into one unit) at Erbenheim. It looks like when the war ended the tanks located at this base were dismantled between December 1918 and January 1919.



A7V-Sturmpanzerwagen 560. Stuka 1. Marchienne-au-Pont (Belgium) – May 1918



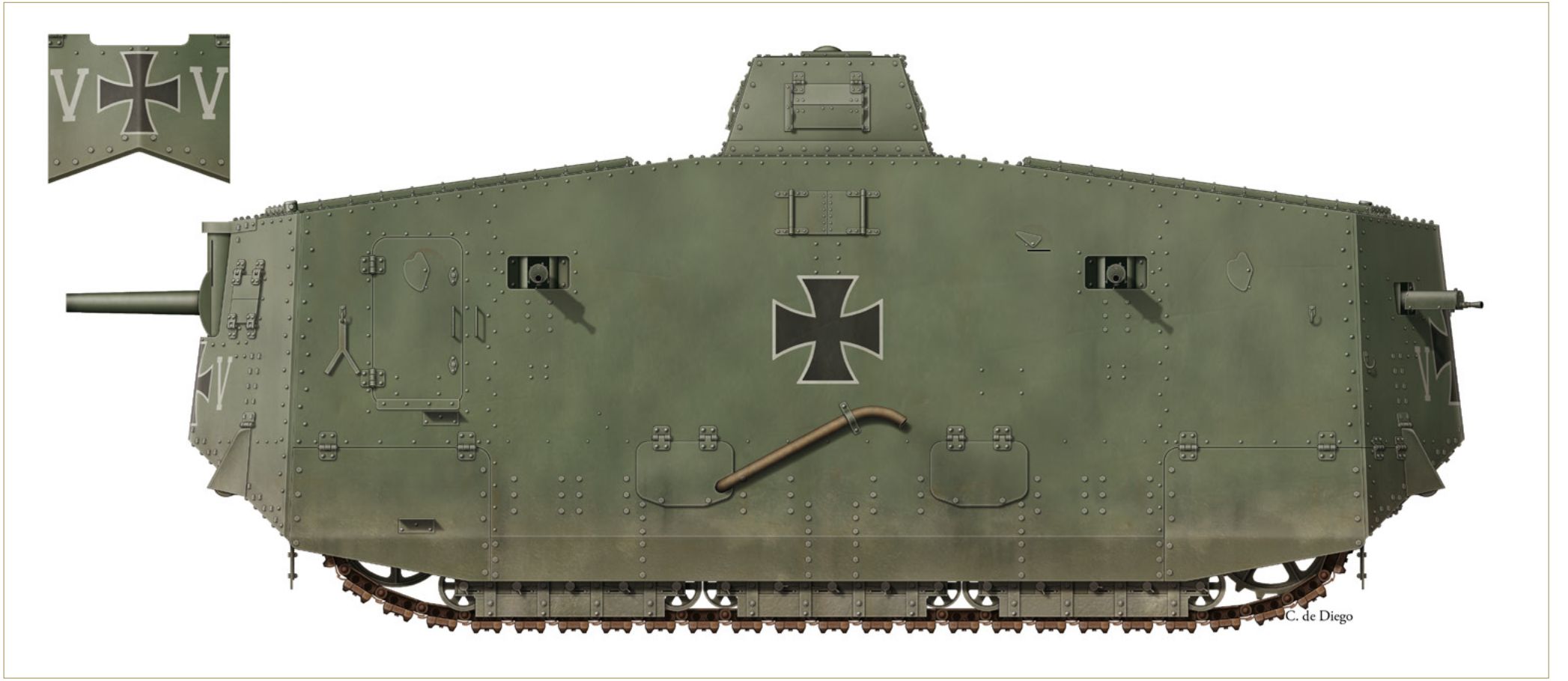
April 2, 1918, Stuka 1 received this *A7V Sturmpanzerwagen* belonging to the second production lot. It was a tank with the frontal armor plate lacking any apertures, specifically designed as an armored vehicle with a gun. Quickly the suspension covering the armor on both sides of the vehicle was removed, the lower hatches of the drive and the idler wheels were cut at an angle, and a skull was painted on the front. In the mid April the tank was camouflaged with a pattern resembling the artillery one to camo their pieces, although more elaborated. This pattern consisted of spots of different colors which geometrical shapes loosely look like the *Lozenge* pattern that was applied to aircraft from the late 1916.

The colors employed to camo were *Grün, Rotbraun,* and *Lehmgelb* (we have previously mentioned that there were two shades of this color). It was painted with a brush, leaving some empty spots, so the factory *Feldgrau* was visible. Lately, the machine gun shields were replaced by some others with smaller openings. In May, with the introduction of the new numerical identification system for the tanks, the central cross of each side was removed and replaced by a white ring circling number "4". Obviously, a cross was painted at each side of the ring. On October 11, during an attack nearby Iwuy, one of the broke. Since the tank could not be recovered, the order was to destroy it.

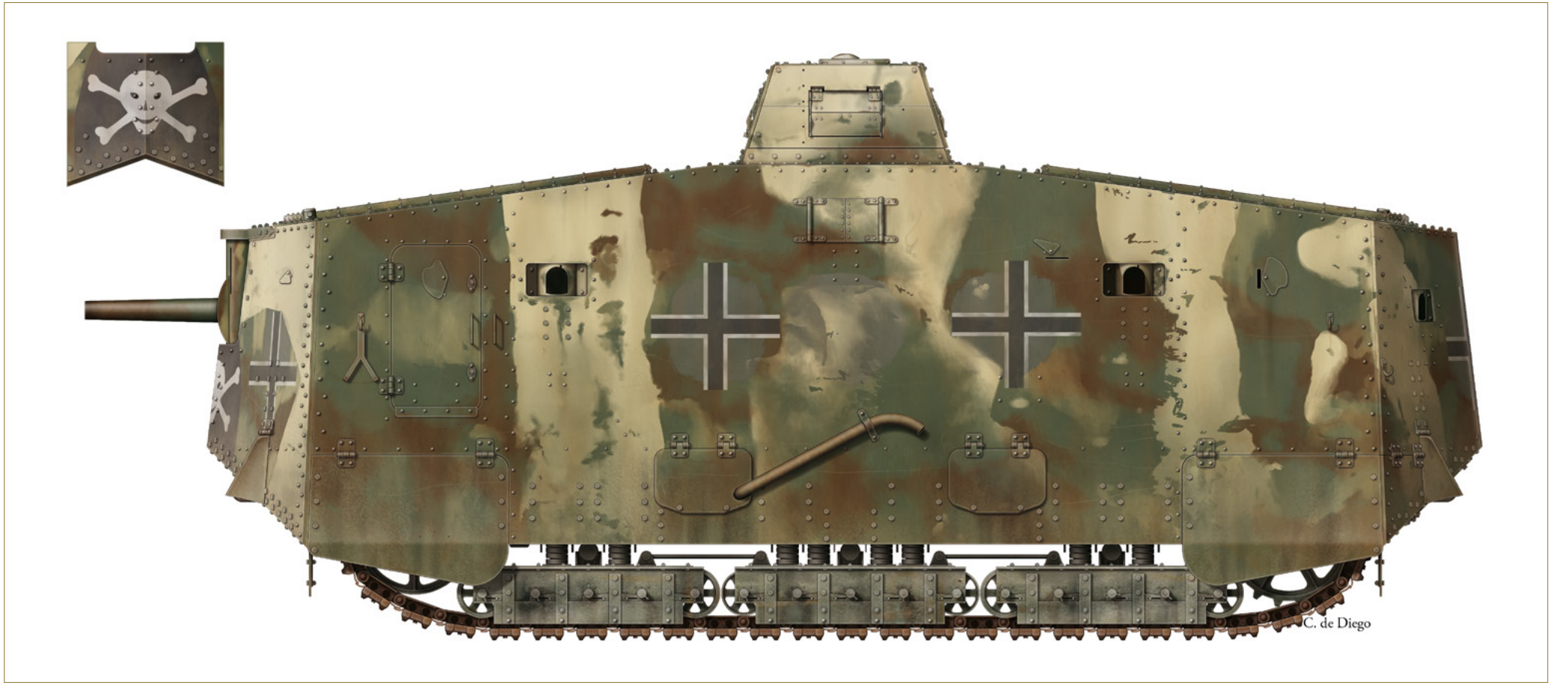
A7V-Sturmpanzerwagen 561 “Nixe”. Stuka 2. St. Gobain (France) – April 1918

The assault vehicle *A7V* is pictured with the original factory configuration, with no modifications. It was tank with chassis number 561, delivered by the B.A.K.P. 20 to Stuka 2 early April 1918. It was assigned the fifth place in the detachment, so number “V” was painted on both sides of the front and on the rear crosses. In mid-April it was named “Nixe.” Probably at that time the central plate of the running gear was removed and the access hatches to the wheels were cut. On April 24, Stuka 2 was assigned to support the infantry at the Cachy attack, town located southeast of Villers-Bretonneux. That day, the *A7V* “Nixe” clashed with the British tanks *Mk. V,* one of them *male* (armed with barrels,) and two *female* (armed with machine guns).

The *A7V* “Nixe” was hit by the guns of the *Mk. IV Male.* A crew member died and other two were seriously injured. Facing an imminent fire hazard, the crew decided to bail out and take cover. Nevertheless, seeing that no fire broke out, the crew returned to the tank and head east. Although there is some controversy regarding the round that hit the “Nixe,” most likely it was hit by a conventional shell, and the shrapnel of the shots of the *Mk. IV* damaged the belly of the vehicle (the only place lacking armor) thus resulting in a coolant leak. Therefore, it only moved two kilometers before engine failure due to overheating. After several attempts to tow it, it had to be destroyed.



A7V-Sturmpanzerwagen 562 “Herkules”. Stuka 1/2. North of France – October 1918



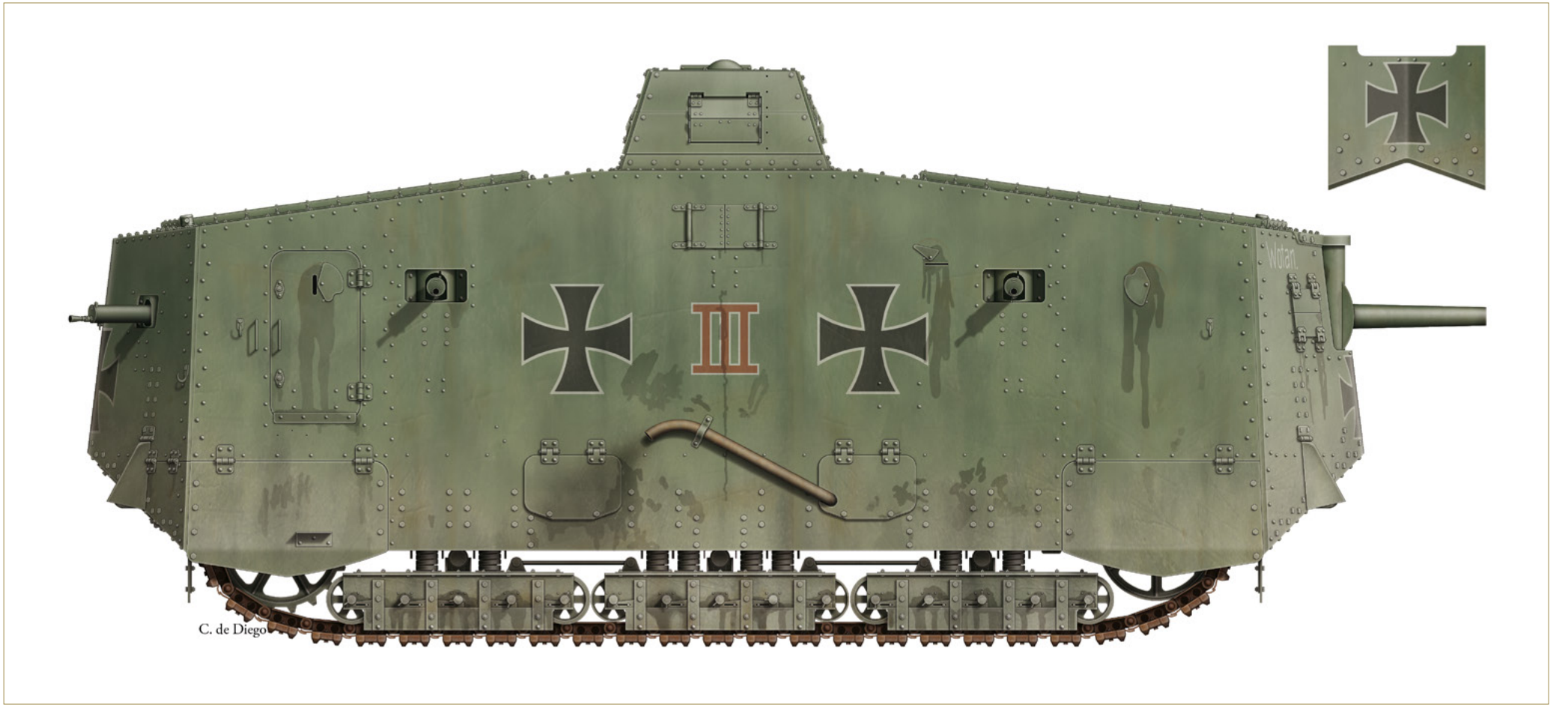
This tank from the second lot, but whose front plates lacking apertures matched the first, was assigned to the Stuka 1 in April 1918. It underwent the usual modification of the armor plates of the bogies and painting according to the detachment. It occupied the fifth place in the formation. Later, the machine gun shields were modified. The 9th June, during an attack in the South of of Roye, it sunk in a huge pit and its crew had to abandon it. Once recovered and repaired by the B.A.K.P. 20, it was delivered to Stuka 2 (as a substitute to 529,) where it was assigned number “V” and named “Herkules.” In August it was hit by a projectile dropped from an airplane, so it had to be sent again to the workshops at Monceau-sur-Sambre. When it was ready, in October, it was placed in a flatbed train car to be shipped.

It never reached its destination: the train felt on enemy’s hands. It looks like it was going to be delivered to Stuka 1, since the front of the tank had a skull painted recalling this unit. Over the old camo (spots of *Lehmgelb* and *Rotbraun* applied over *Feldgrau*) wide strips of light *Lehmgelb* were painted. The old crosses of curved lines were painted onto (probably with *Feldgrau*) and replaced by new straight lined crosses. Also, on both sides of the skull two crosses were painted. It looks like this tank was scraped in France.

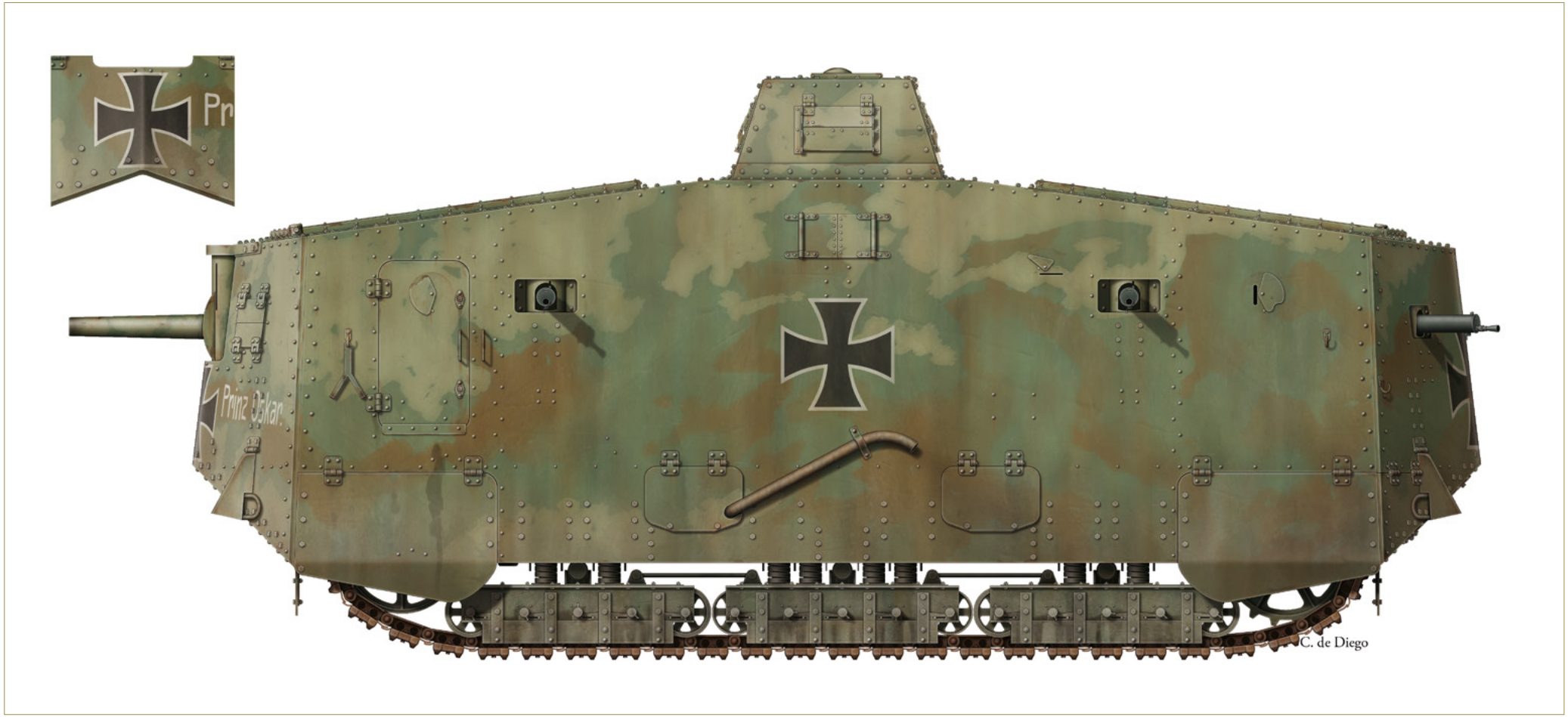
A7V-Sturmpanzerwagen 563 “Wotan”. Stuka 2. North of France – June/July 1918

The second lot tank with chassis number 563 was delivered to Stuka 2 in early May 1918. Immediately it was put through the usual modification of the armor of the bottom sides. The plates removed were cut sized to the walls of the casemate and were used as reinforcement. The machine gun shields were also replaced by others that left less free room between its sides and the machine guns. Named “Wotan,” painted on the front top right and back left, this tank replaced vehicle 542 (lost on April 24,) so it was assigned the same number in the formation: “III.”

The drawing is based on a series of photographs taken during the training of the detachment in early summer of the same year, specifically at a French inhabited village. In the pictures there is a dusty *Sturmpanzerwagen A7V* 563 painted with a color that seems to be medium *Feldgrau*. Later, during the west attack at Reims, the 15 July, the tank had a camo pattern with *Lehmgelb* and *Rotbraun* spots. Supposedly, “Wotan” was sent along other tanks to the base at Erbenheim, and they were all scrapped at the horse track of this base between December 1918 and January 1919.



A7V-Sturmpanzerwagen 564 “Prinz Oskar”. Stuka 3. Marchienne-au-Pont (Belgium) – May 1918



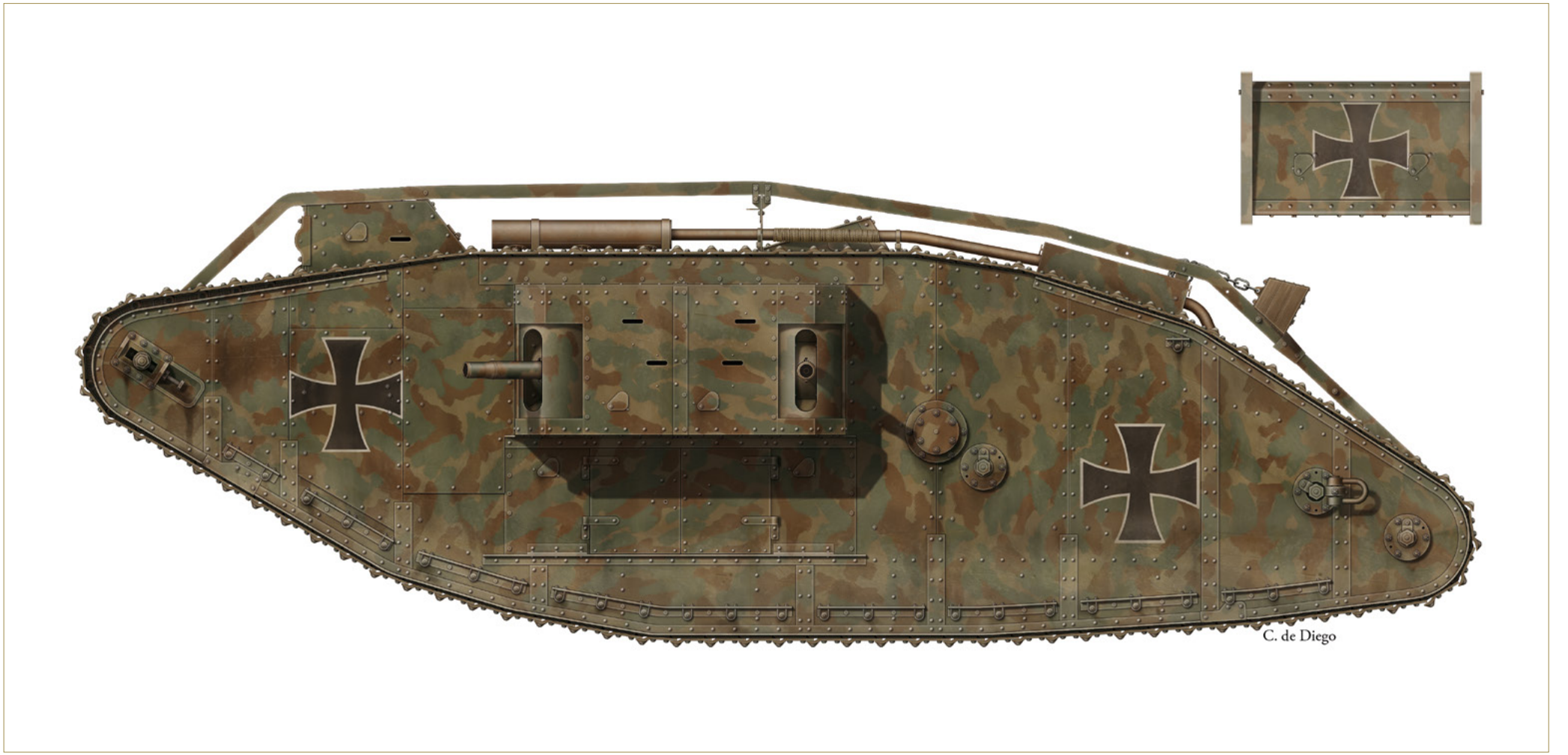
In early May 1981, Stuka 3 received the last A7V manufactured. It was a second lot tank with chassis number 564. This tank was put to the usual modifications: the suspension armor plates were removed, the lower corner of the armor hatches were cut at a curved shape, the machine gun shields were replaced, and they added armor plates around the casemate (it did not always have them on). A peculiarity of its looks that differentiate it from other tanks: the shields of the tow rings were cut at the sides so that they would not rest on the armor.

This tank, replacement of tank 506 lost on April 24, was painted with a camo pattern made of lighter shades of *Lehmgelb* and *Rotbraun* spots. It was named “Prinz Oskar,” this name painted on the front left plate and on the right rear plate. After seeing action in the south of Roye, on May 9, the name was shortened to “Oskar.” Later, at an undetermined date, the name was painted over. The last war action where this tank took active part was on October 7, during an attack that took place at Saint-Étienne. Afterwards, probably in early November, it was sent to Erbenheim and then scraped with other tanks, but unfortunately there are no pictures to corroborate it.

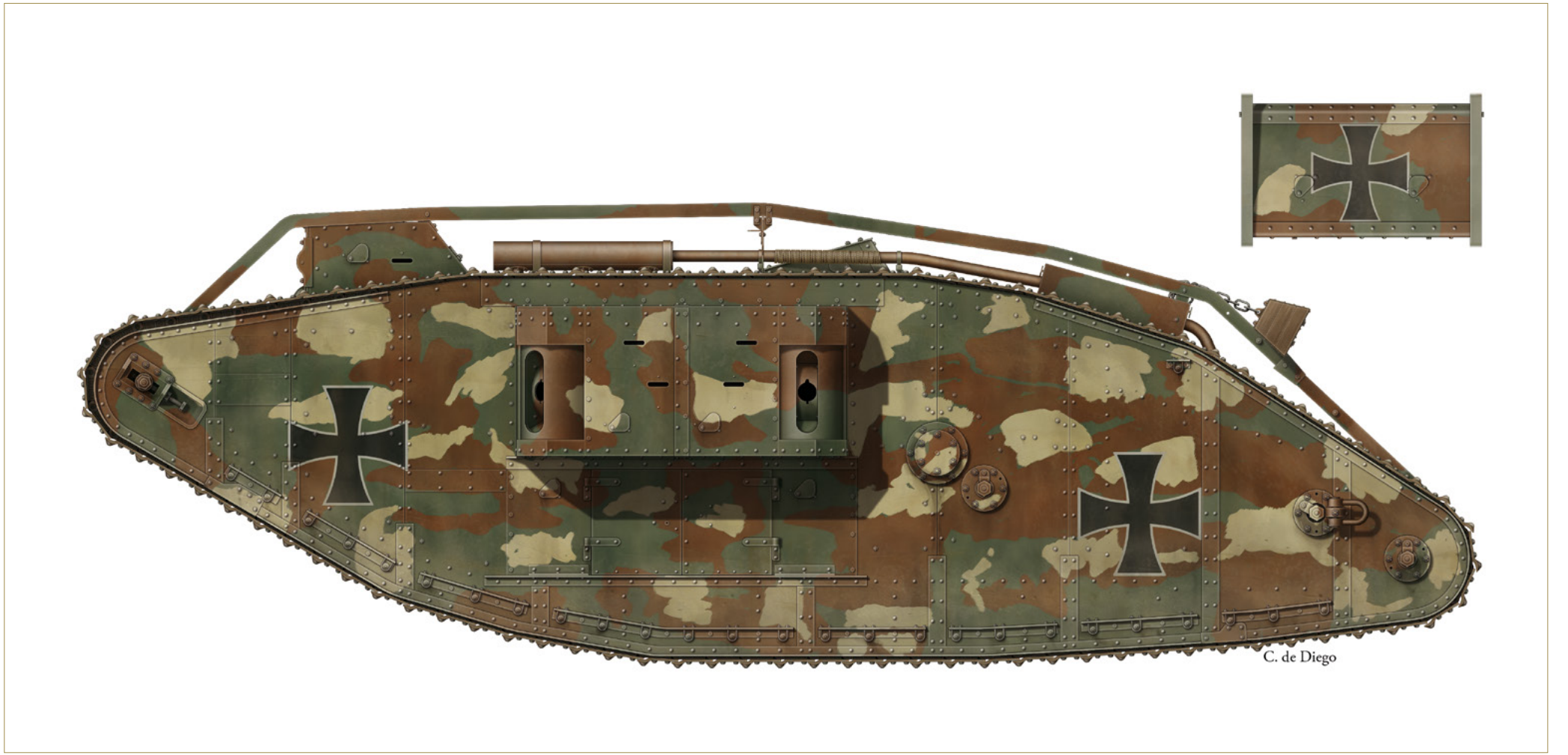
Schwerer Kampfwagen (Beute). Abteilung Nr. 11. France – March 1918

With the *Beutepanzer*, or bounty tanks, it was decided to keep the *Lewis* machine guns, since it was too complicated to adapt the *MG. 08* to the structure. Nevertheless, these British weapons had to be modified so that they could fire German ammo. Also, it was ordered to adapt to the front swivel the anti-tank rifle *Tankgewehr* of 13 mm. Among the *Male* tanks, which had two barrels, the original 6 pound ones were replaced by *Maxim Nordenfelt* 5.7 cm ones, the same weapon mounted in the *A7V*.

The first unit of captured tanks that entered combat was the Stuka 11, at St. Quentin, but since the *Maxim Nordenfelt* had not been received yet, it had to operate with three *Mk. IV Female* armed with machine guns, and another two *Female* from Stuka 12. These tanks were camouflaged with a pattern based on *Feldgrau* spots and possibly also *Rotbraun* that were brush-painted over the original *Khaki*. The only marks painted were the national emblems.



Schwerer Kampfwagen (Beute). B.A.K.P. 20. Belgium – Summer 1918

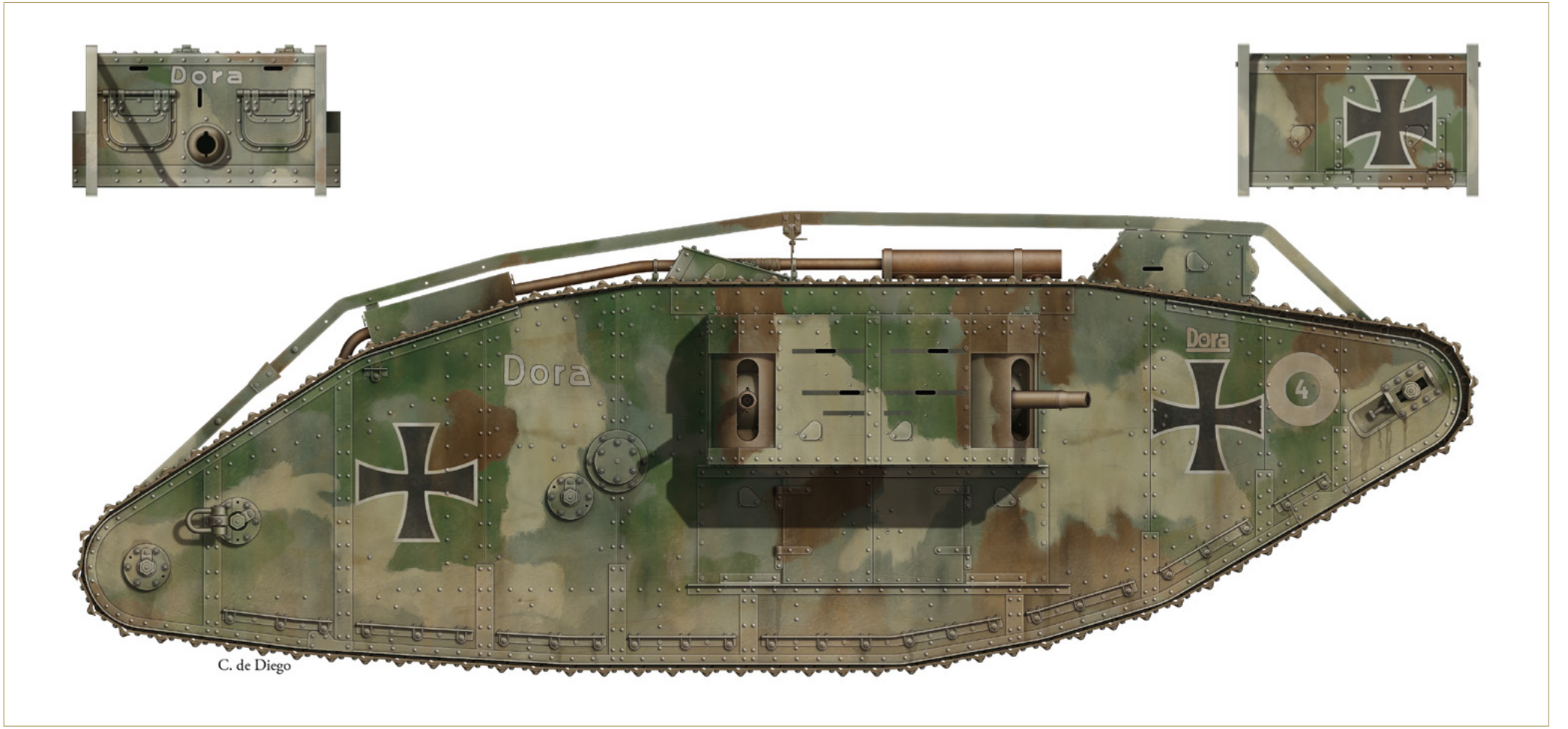


The *Beutepanzer* were distinctively marked by crosses to avoid confusions. At each side of the hull, two crosses were painted, another one up front, and a last one on the rear. Also, the roof of the casemate wore a cross to facilitate the identification by aircraft (see detail). The units that entered the action on March 21, 1918, at St. Quentin, had a camo pattern with *Feldgrau* spots, and possibly also *Rotbraun*, painted directly over British *Khaki*. Nevertheless, during the attack at Reims on June 1, they already wore *Lehmgelb* and *Rotbraun* spots scattered over a *Feldgrau* base.

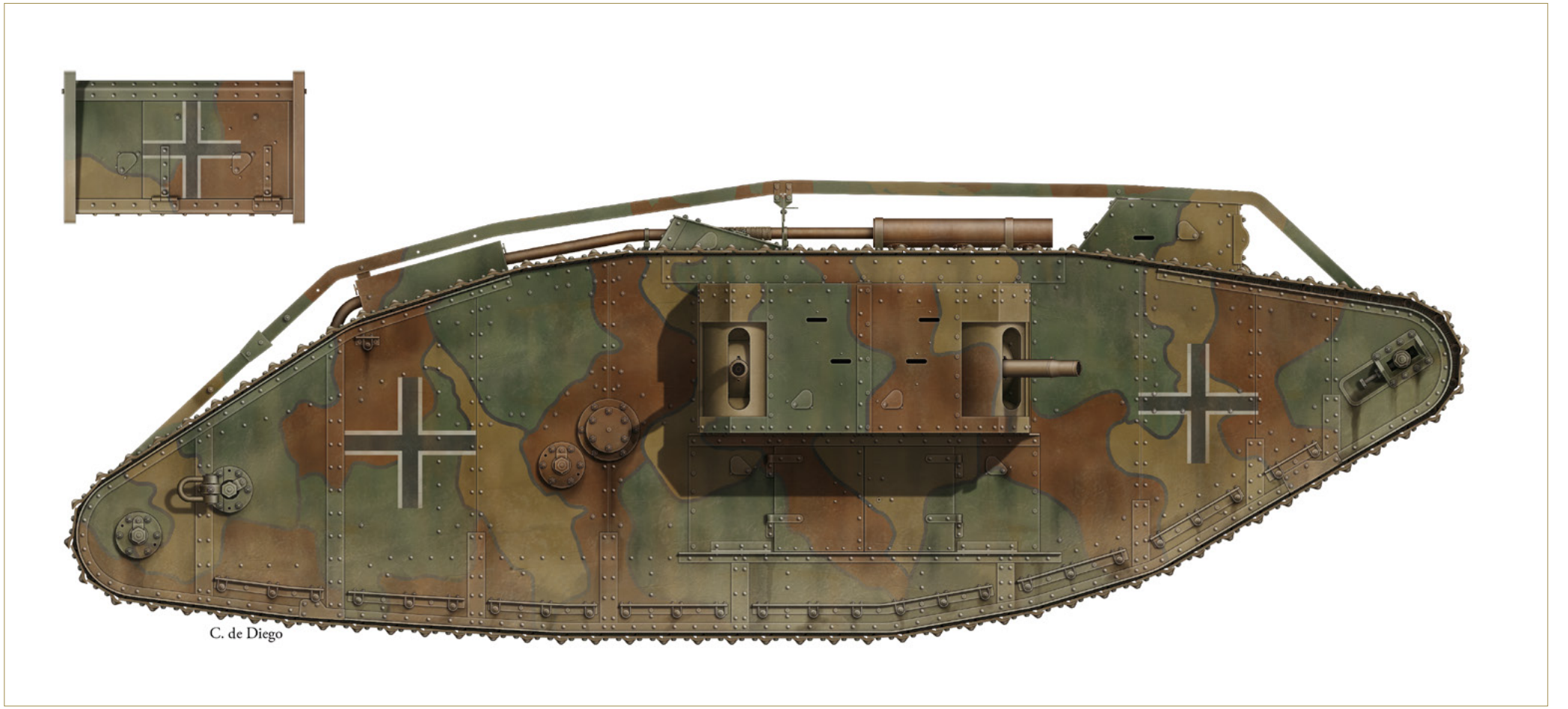
The picture depicts a *Mk. IV Female* with the last there colors, just freshly painted by the specialized personnel at *Bayerische Armee-Kraftwagenpark 20*. This pattern was characteristic of that excellent workshop. Up front, on the right side, one can see that the armor has been repaired with two rectangular plates. The only emblems were the Iron Crosses *(Eisernes Kreuze)*.

Schwerer Kampfwagen (Beute) 117 “Dora”. Abteilung Nr. 11. France – June 1918

During the preparation for the attack at Reims, four detachments of captured or bounty tanks were organized (Stuka 11 to Stuka 14). By then, the tanks were repainted color *Feldgrau* and were completely camouflaged with German colors. Each detachment had two *Mk. IV Male* and three *MK. IV Female* that were numbered 1 to 5. The number was painted inside a ring whose color varied according to the unit: white for Stuka 11, red for Stuka 12, yellow for Stuka 13, and blue for Stuka 14. Later, when Stuka 15 and Stuka 16 were organized, these units were assigned green and brown colors. The tank in the picture is the fourth tank of Stuka 11. The name “Dora” and the ring with number “4” painted next to the cross on the front side of the tank were covered with mud to reduce the contrast. In order to confuse the enemy’s infantry, the placement of the sight slots located on the side sponsons were made hard to distinguish thanks to long straight lines painted black. Same as the *A7V*, whose chassis number was painted inside the doors and started with a “5,” the *Beutepanzer* had assigned a three digit number that started by “1” (*Female*) or “2” (*Male*). In this case, the number is 117.



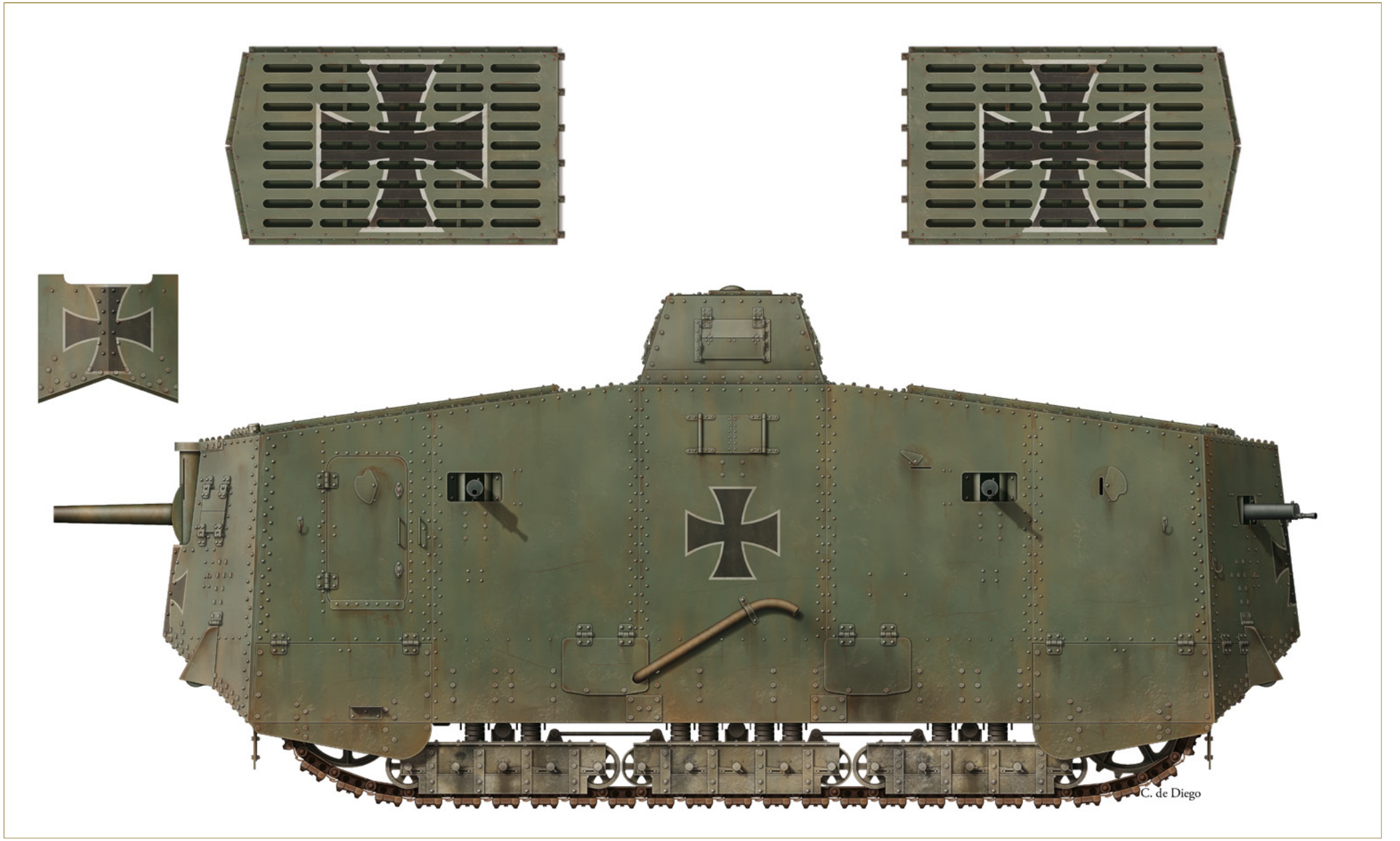
Schwerer Kampfwagen (Beute). France - October 1918



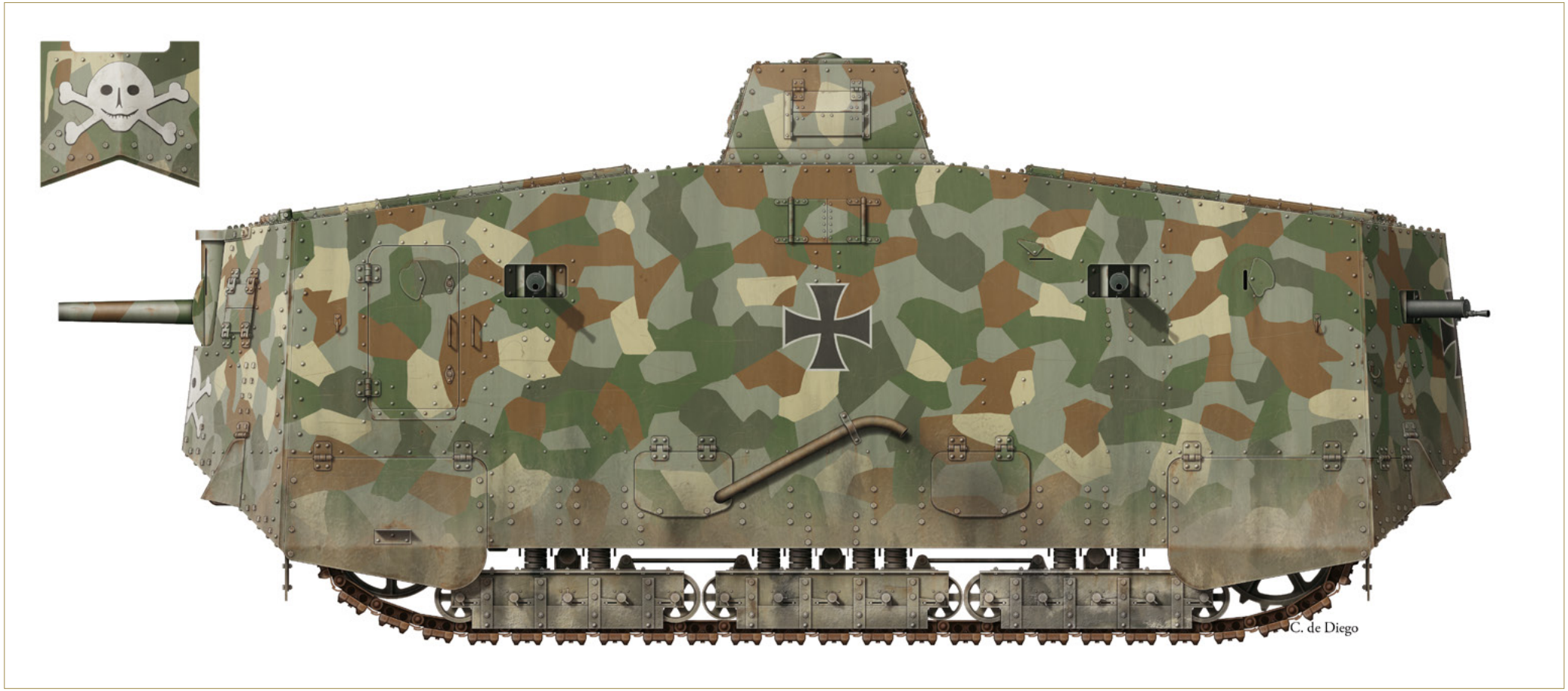
Before the war, the facilities of the B.A.K.P. 20 belonged to the Societé Anonyme Saint Germain, a company essentially focused on manufacturing railroad cars. It is logical to believe that the Germans took advantage of the paint supplies at the plant to paint their tanks, at least the ones similar to the paint they used to camouflage their artillery pieces, such as: dark green and reddish brown, colors used to paint the outside of railroad cars, and ivory and amber (both tones of Lehmgelb, one lighter and the other one darker,) used in the inner part of the cars. In september 1918, the multicolor pattern named *Buntfarben Anstrich* was adopted, although it did not mean that all tanks had to be repainted this very paint scheme.

This pattern consisted of large spots of three or four colors outlined in black. The shape of the spots could be regular or irregular (trapezoidal) with either curved or straight edges. The look of the tanks with this camo pattern could vary a lot depending on the crew in charge. The Mk. IV Female in the illustration has a dark shade. It is camouflaged using, *Rotbraun*, and *Feldgrau*, outlined by *Schwarz* lines. It does not have formation number or name, just the *Balkenkreuze* located at their usual place. Notice the large hatch located on the roof of the casemate.

A7V-Sturmpanzerwagen 503 “Faust”. Stuka 3. North of France - April 1918



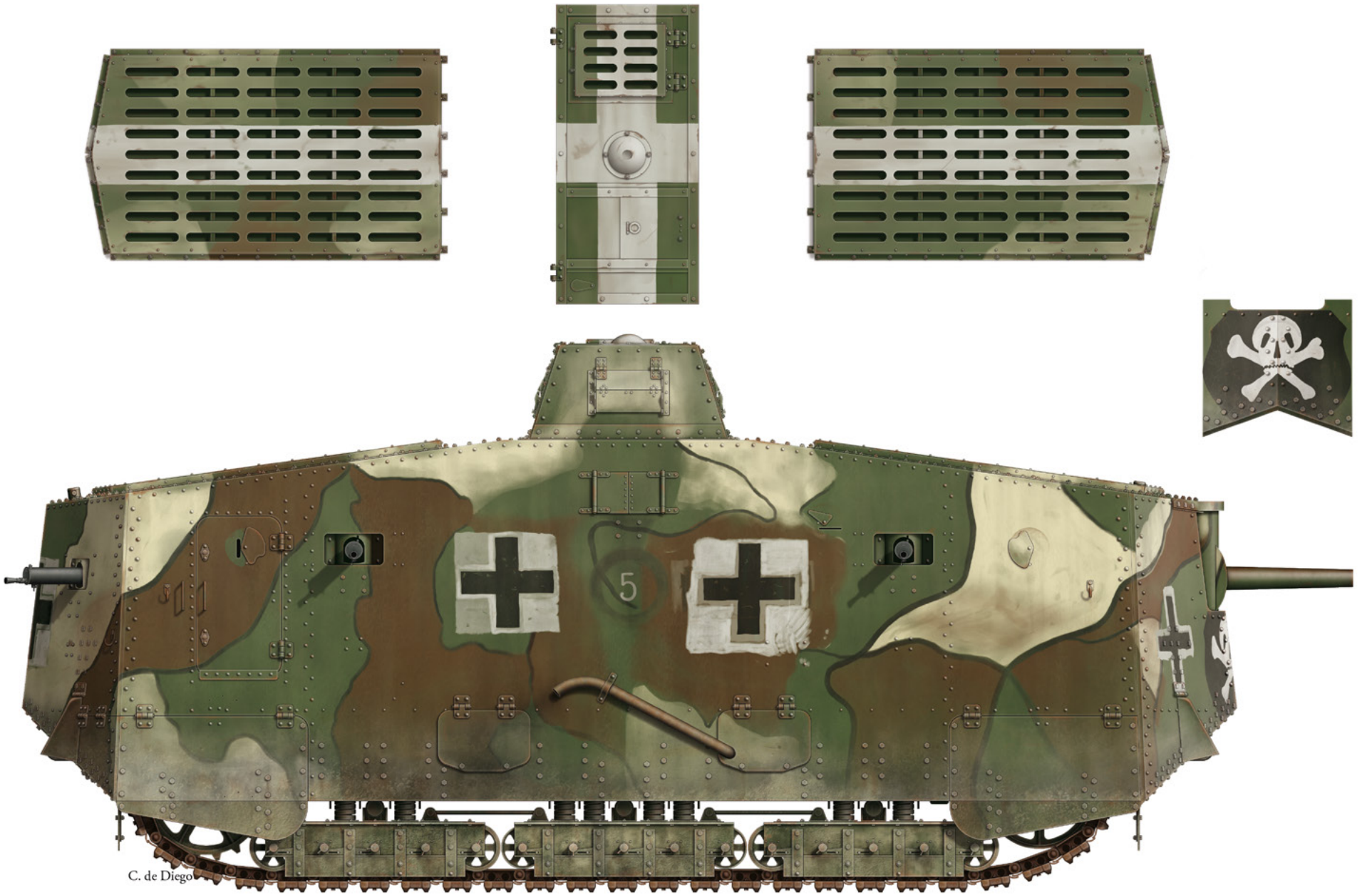
A7V-Sturmpanzerwagen 526 “Alter Fritz”. Stuka 1. Villers-Bretonneux (France) - April 1918



The illustrations over these lines, on the previous page, and on page 78, are included to show the changes that underwent during the war to some of the A7V already described. Specifically the *A7V Sturmpanzerwagen* with chassis numbered 503, 526, and 540.

In the picture on page 76, one can see the look of the A7V 503 at the beginning of April 1918, when it still did not wear any camo pattern, this happened in October. It was named “Faust” although it was renamed on several occasions. The national emblem was painted on both sides, on the rear, and on both grilles on the roof.

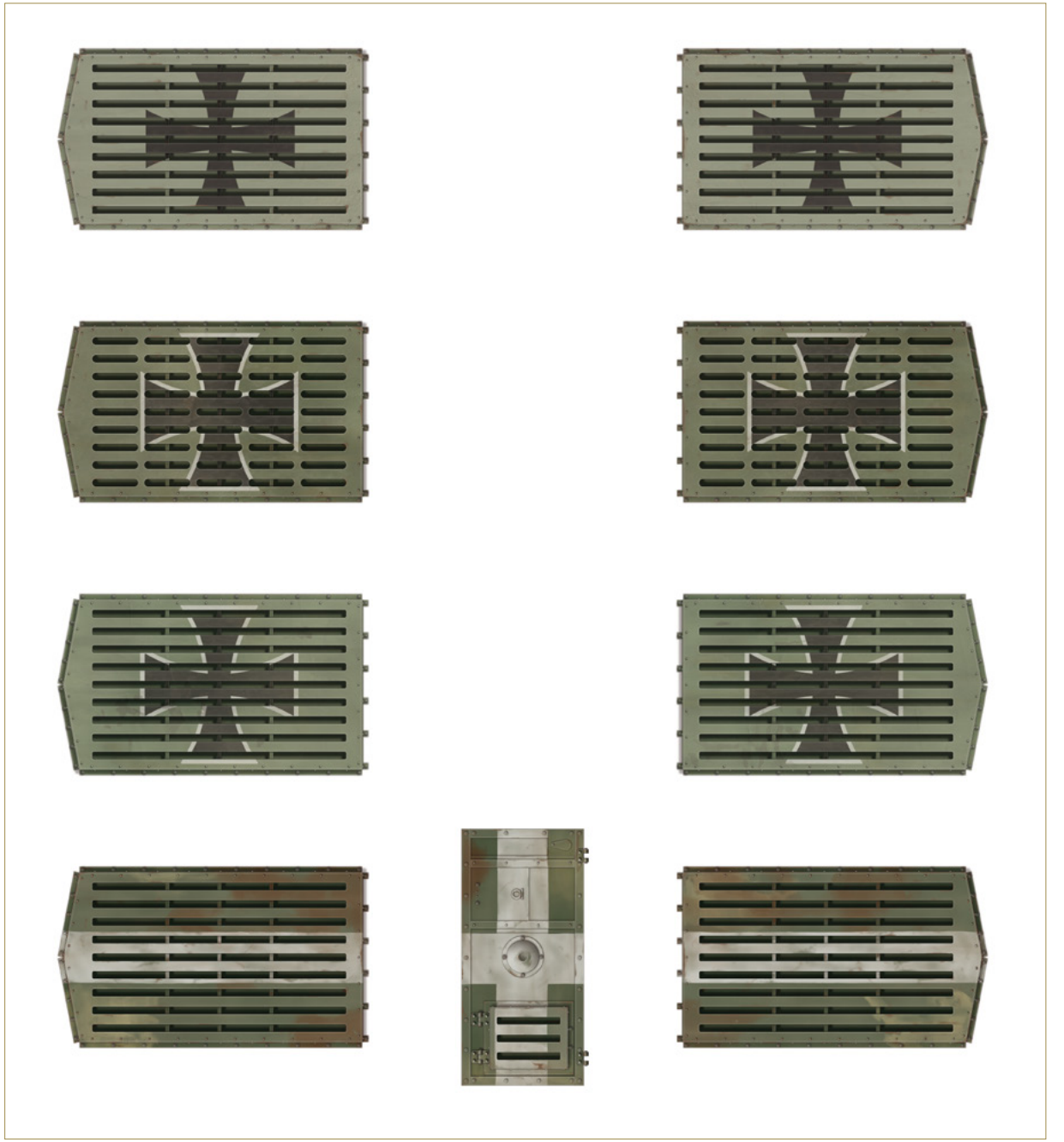
The drawing on top depicts the *A7V* with chasis number 526. At the battle of Villers-Bretonneux this tank wore a very interesting camo consisting of spots of dark color *Lehmgelb, Rotbraun, Grün,* and *Feldgrau,* painted with a brush over color *Feldgrau* of a medium-light tone (that was the color applied in the factory). This pattern, similar to the Lozenge of the aircraft, was frequently applied to the artillery pieces. As one can see, the national emblem, the Iron Cross, was painted on both sides and on the rear of the hull. Also it was painted at a large scale on top of both grilles located on the roof of the vehicle in order to facilitate the identification by the German aircraft.


5
C. de Diego

Aerial identification systems for the A7V-Sturmpanzerwagen

The National Emblem, the black *Eisernes Kreuz* outlined with white paint, was probably painted on top of the tanks in April 1918, during the first or the second weeks. It was entrusted helping the pilots and the observers to identify the tanks so they could prevent confusions. These markings were large enough to be easily visible. They were painted on both large ventilation grilles located on the top of the *A7V*. There are some samples depicted in the right drawing. On top, the grilles of the *A7V Sturmpanzerwagen* 526, with their crosses painted black -but still without the white outline-. Next, an example of the first production lot (like the 543) next the paintings of a second lot tank (such as the 563 “Wotan”). Last, a drawing of how the roof of the *AV7* 562 “Herkules” would look like: with a white longitudinal band that went from one side to the other and a transversal band of the same color on top of the casemate. This mark, more visible than the crosses, was probably introduced at the same time of the *Balkenkreuz*, on October 1918. In all pictures taken of the *A7V* 540 by the end of October 1918, the identification mark is clearly visible. The illustration featuring the *A7V* 540 which appears in the previous page has been made according to some photographs appearing in the book (see the one in page 46).

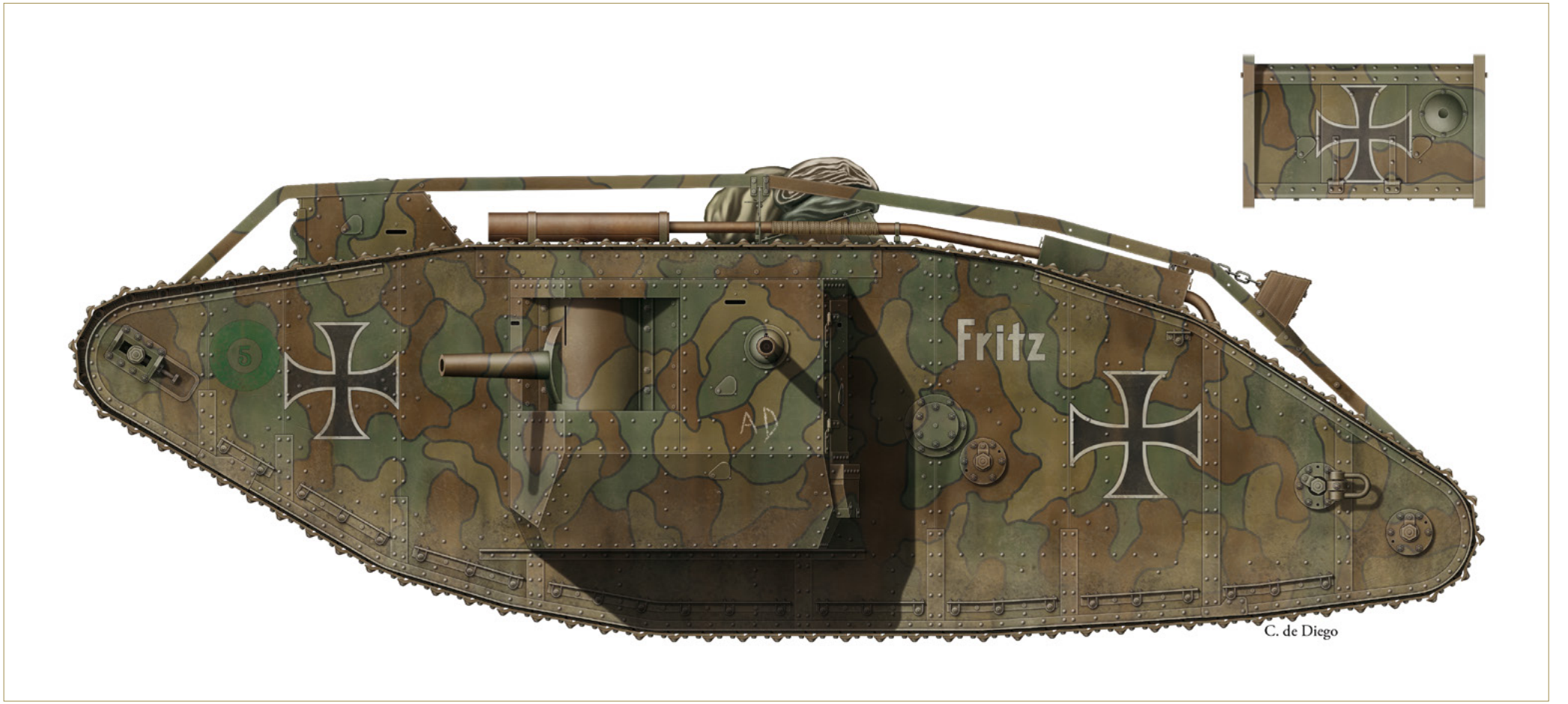
On October 1918 (the time that matches the illustration) this tank had a camo pattern *Buntfarben Anstrich* consisting on dots painted *Lehmgelb*, *Rotbraun* and *Grün* outlined by some black lines. The white identification band was painted on the roof, and there was a number “5” put between the two crosses which showed that it was the fifth tank of its detachment. This number was initially encircled by a white ring (Stuka 1) and then masked with dark paint. On October 30 this tank broke down while taking active part in the counter-attack at Cambrai (France). Since it could not be repaired, it was abandoned, although all the parts that could have been used to repair some other vehicles were removed.



Schwerer Kampfwagen (Beute), Stuka 15. France - September 1918

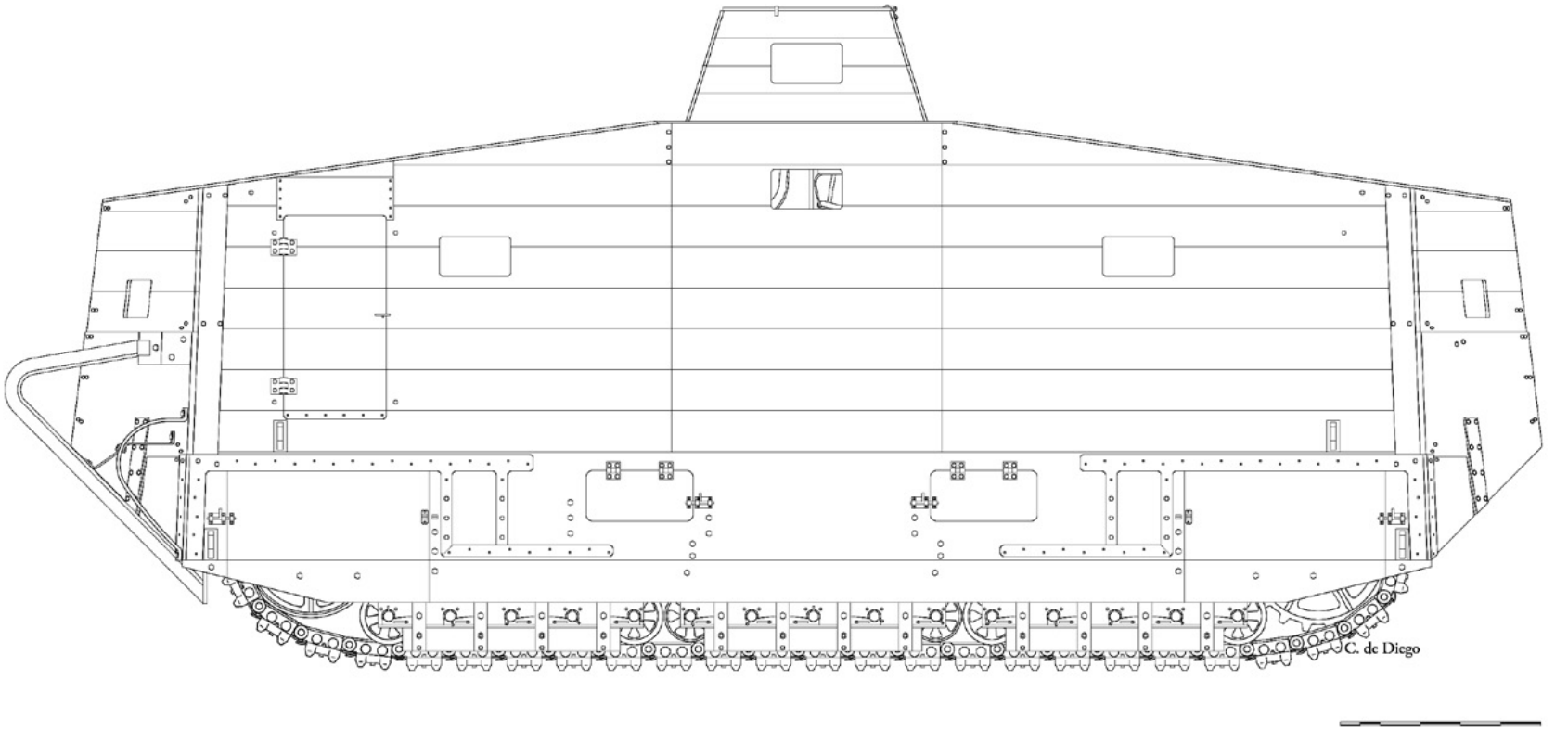
As previously stated, on the *Mk. IV Male* the factory weapons were replaced by the same guns of the *A7V*. These guns had a semi cylindrical shield smaller than the one of the British barrels, so between them and the armor of the sponsons there were gaps that had to be sealed with steel strips. Inside these tanks, fuel leaks were common, so they would catch fire when the fuel would reach hot engine parts, or when they were hit by the enemy's artillery grenades. Thus, to provide a fast evacuation of the crew, in mid July 1918, it was mandated to place a hatch on the roof of the cabin of all *Mk. IV*.

These tanks were also equipped with a compass such as the one installed in the *A7V*, left of the aforementioned hatch (see detail). The camo of the *Beutepanzer* in the illustration belongs to an early pattern called *Buntfarben Anstrich*, where colors *Rotbraun*, *Ocker*, and *Feldgrau*, almost do not stand out. The spots, outlined by *Schwarz* lines, were quite irregular. The national emblems are still the Iron Cross. Named as "Fritz," this *Mk. IV Male* could have been part of Stuka 15 (color green). It looks like the other "Fritz," but *Female* version, was placed with Stuka 14 (blue color).

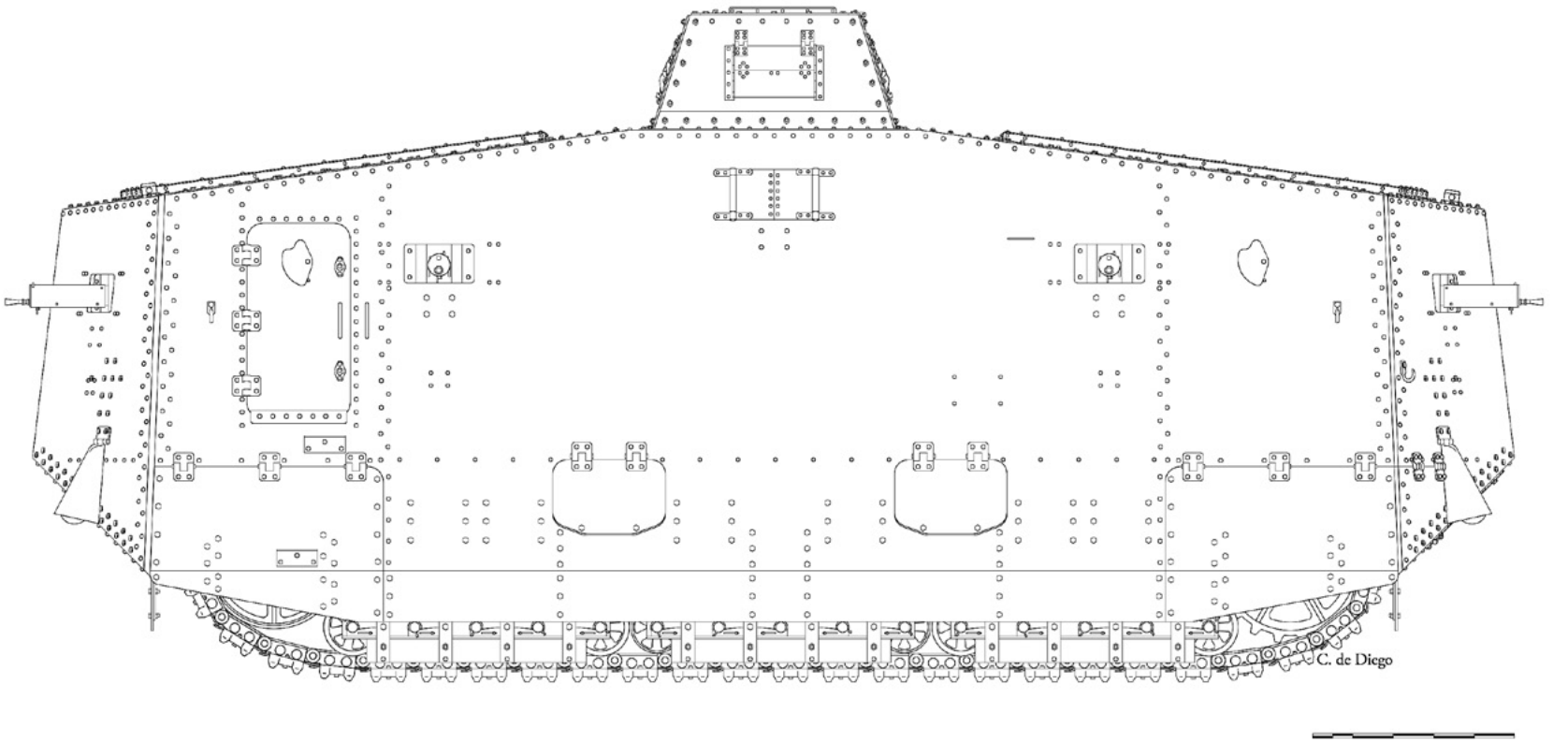


BLUEPRINTS

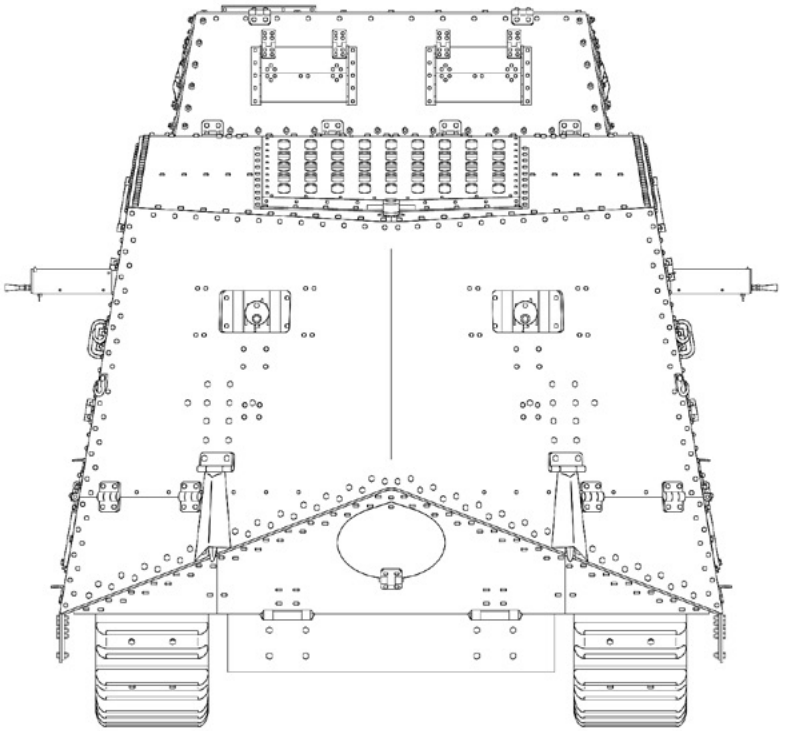
A7V-Sturmpanzerwagen. Prototype with a wooden superstructure. Scale 1/35

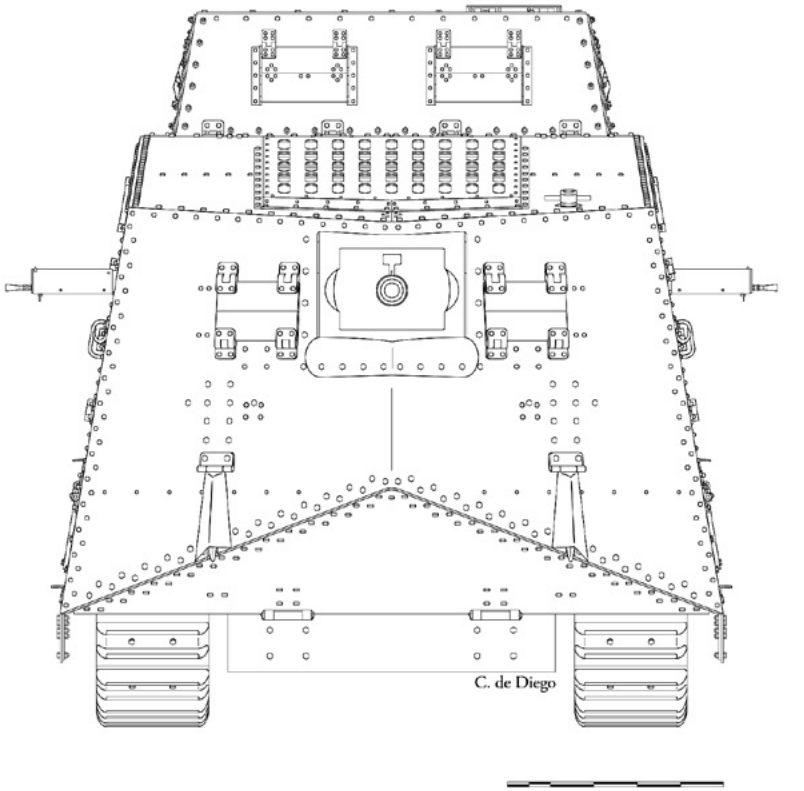


A7V-Sturmpanzerwagen. First production lot (MG). Scale 1/35

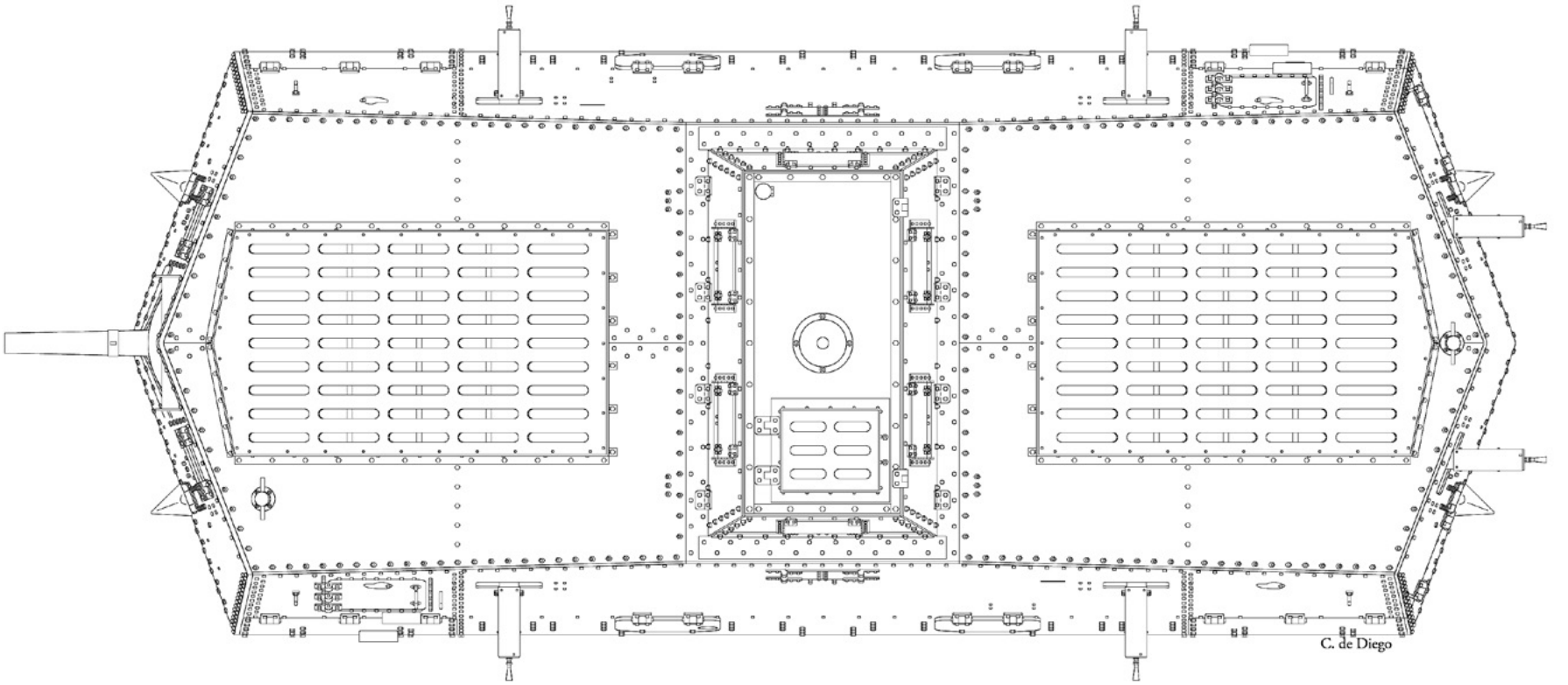


A7V-Sturmpanzerwagen. First production lot. Scale 1/35

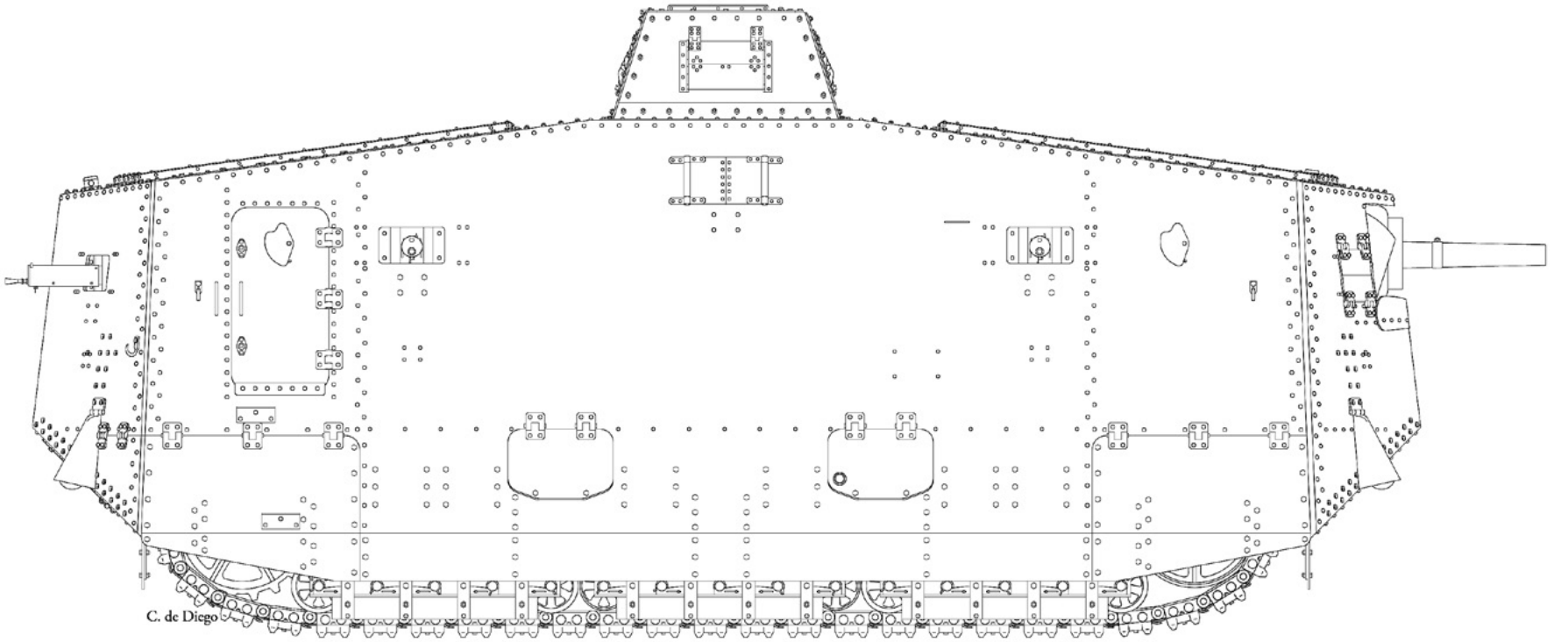




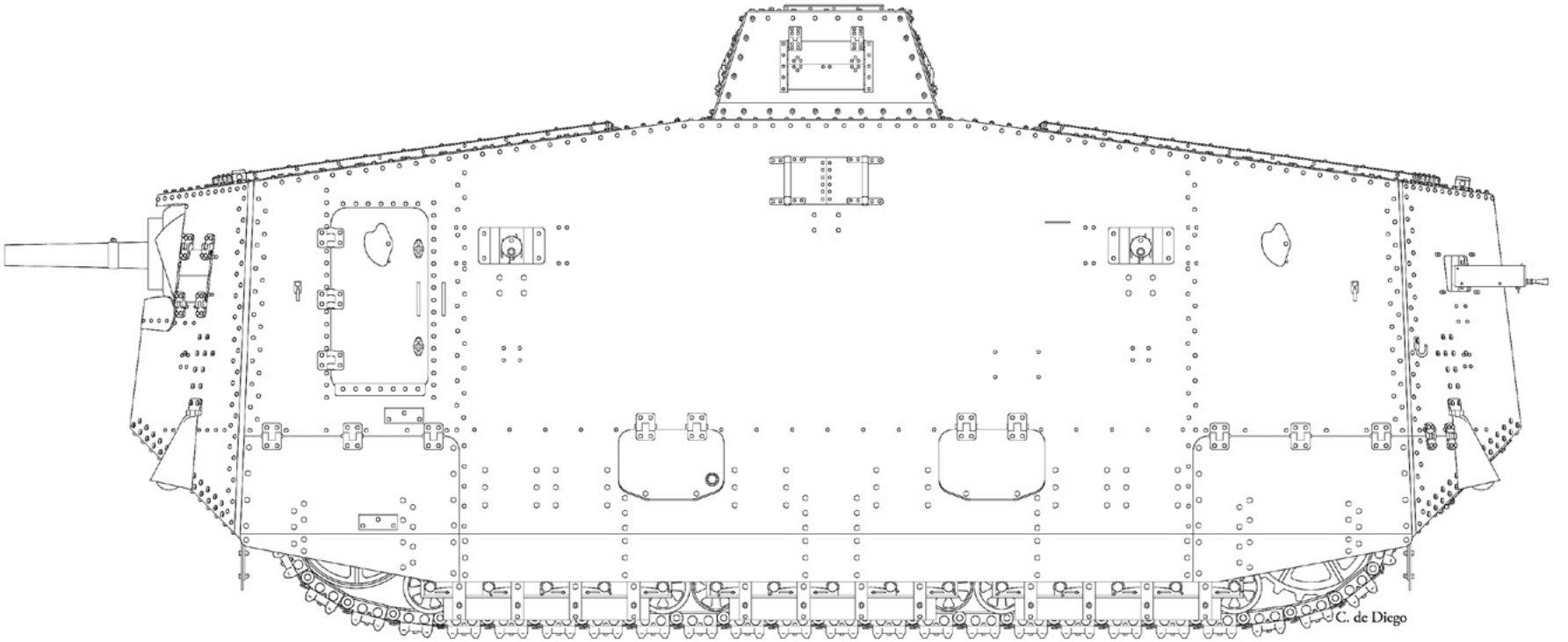
A7V-Sturmpanzerwagen. First production lot. Scale 1/35



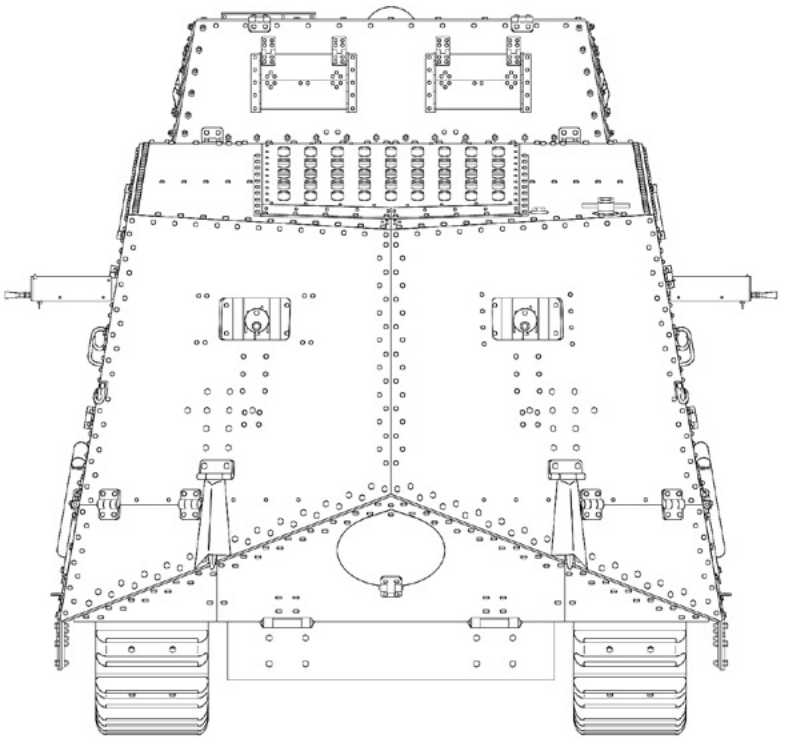
A7V-Sturmpanzerwagen. First production lot. Scale 1/35

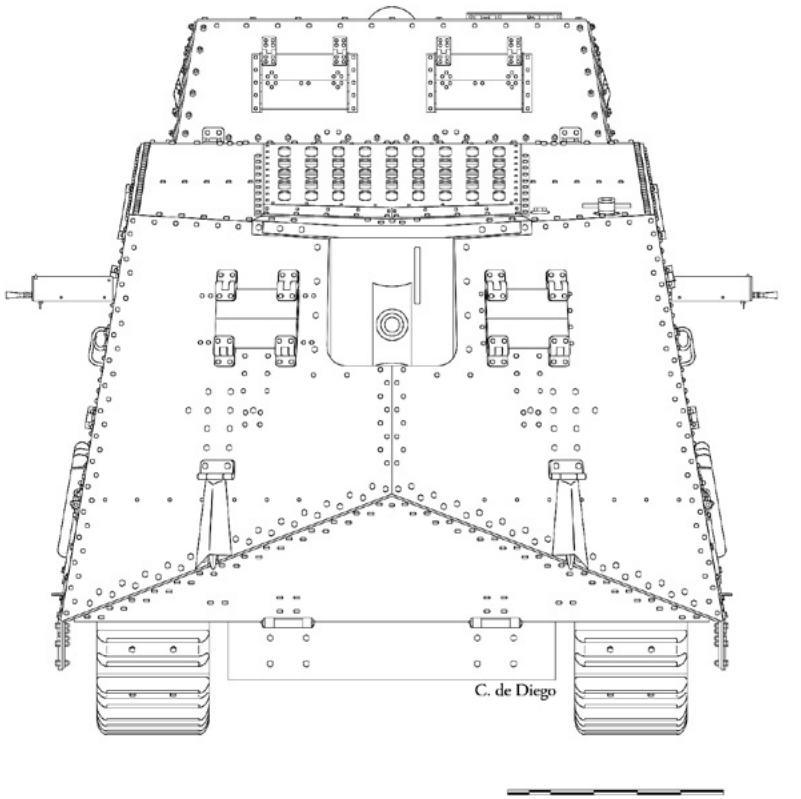


A7V-Sturmpanzerwagen. First production lot. Scale 1/35

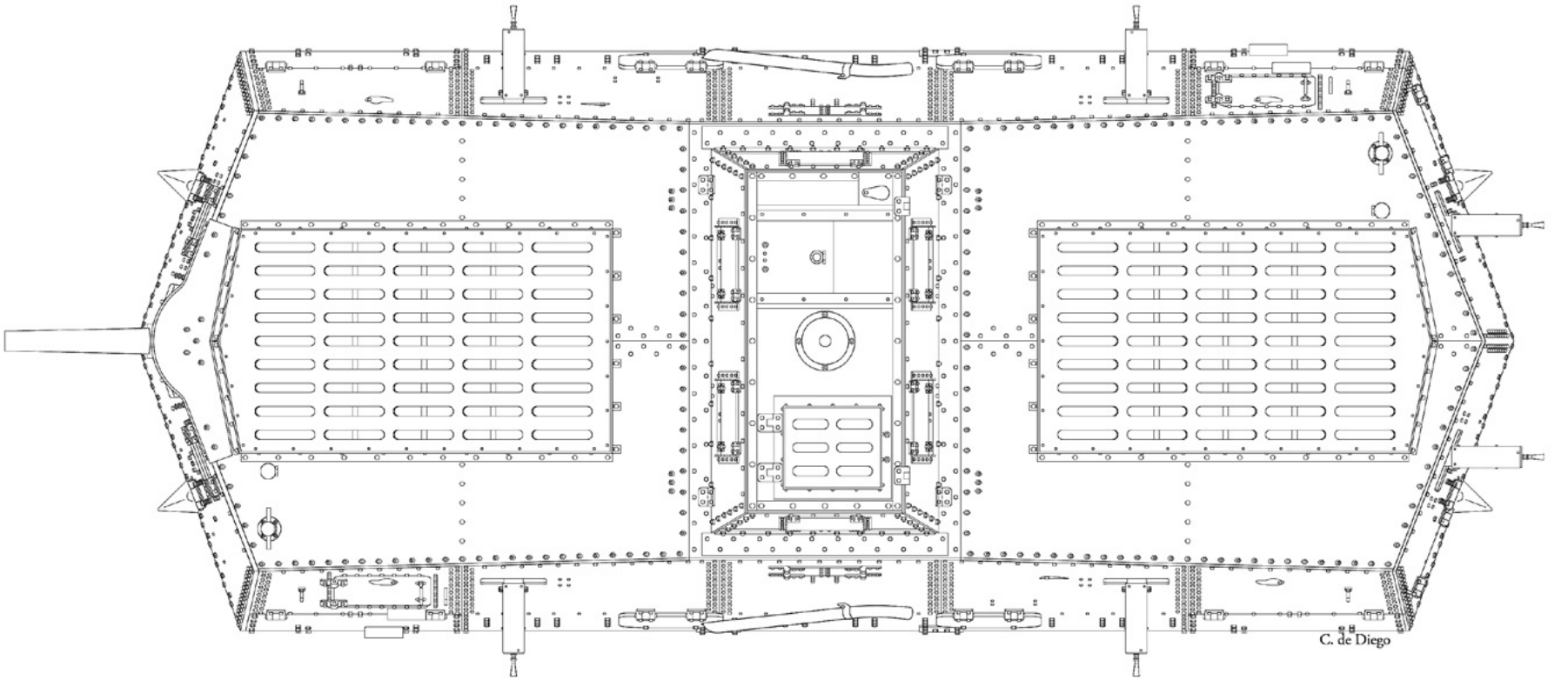


A7V-Sturmpanzerwagen. First production lot (Krupp). Scale 1/35

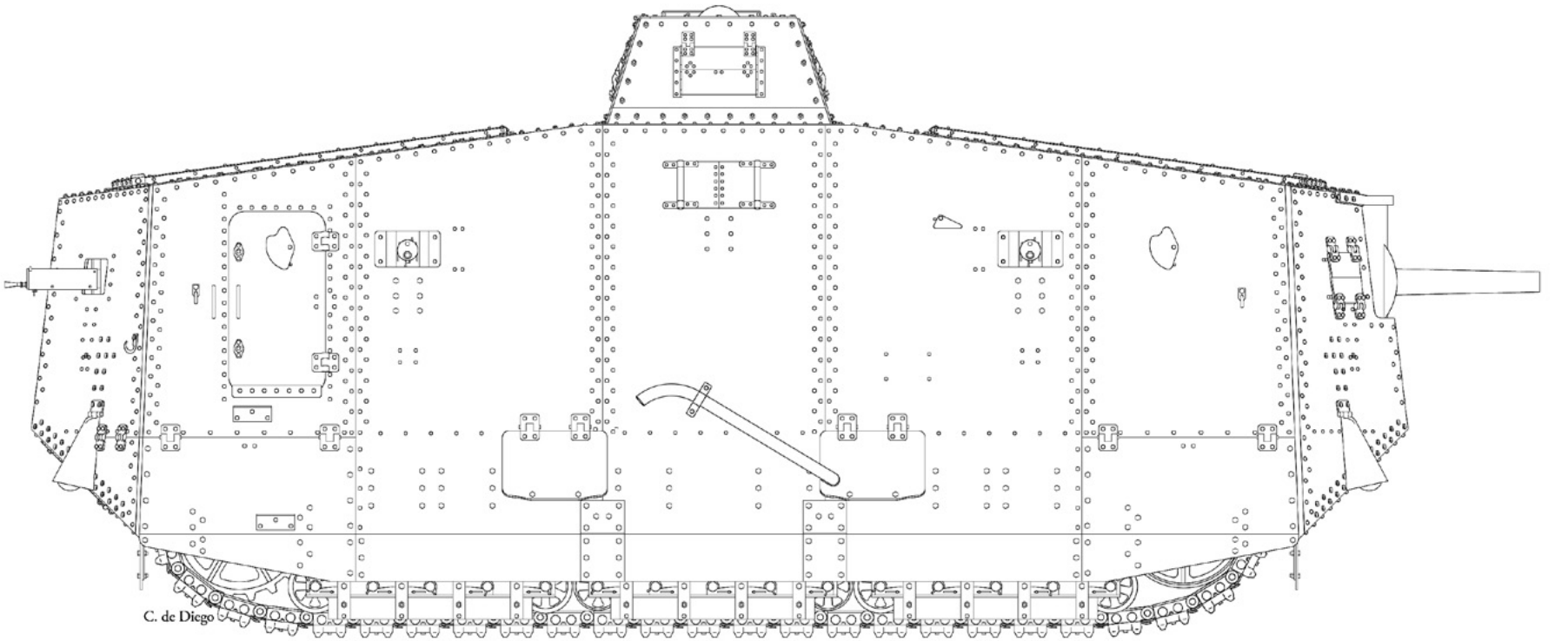




A7V-Sturmpanzerwagen. First production lot (Krupp). Scale 1/35



A7V-Sturmpanzerwagen. First production lot (Krupp). Scale 1/35



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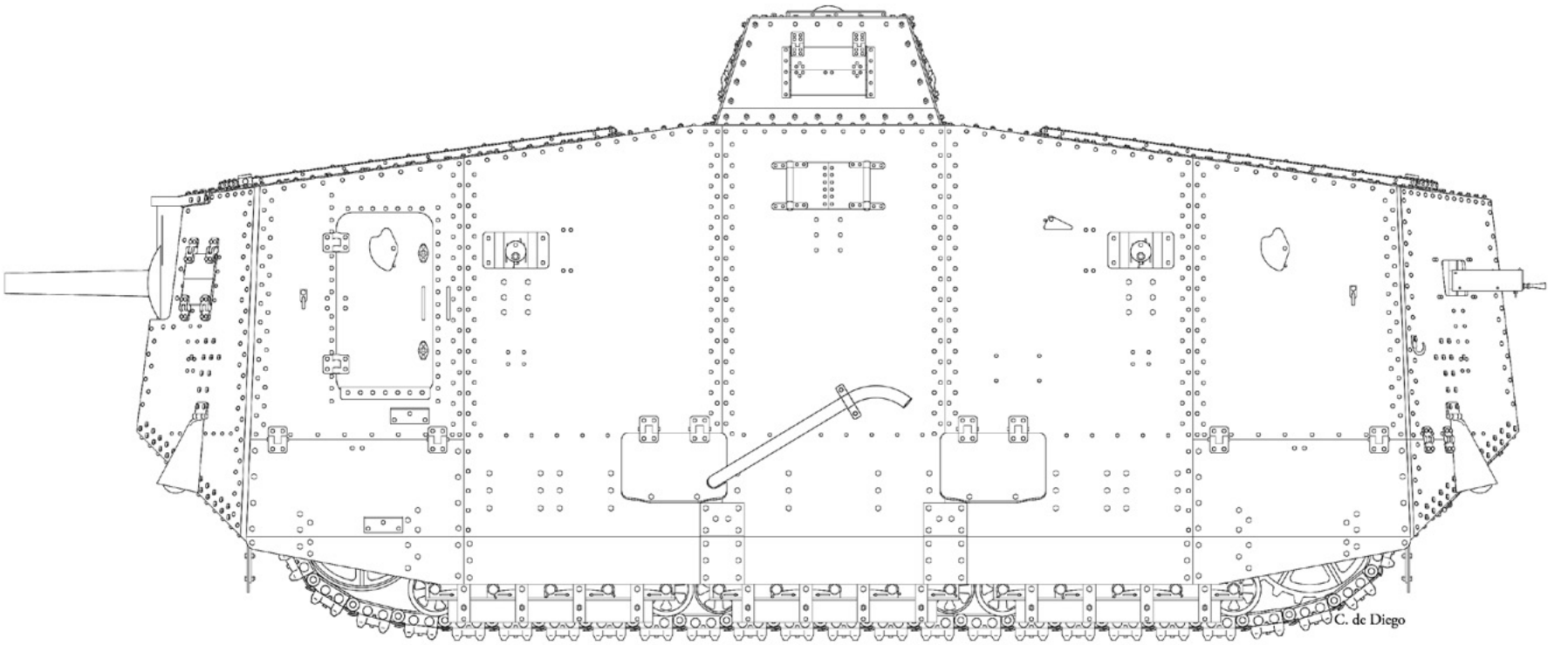

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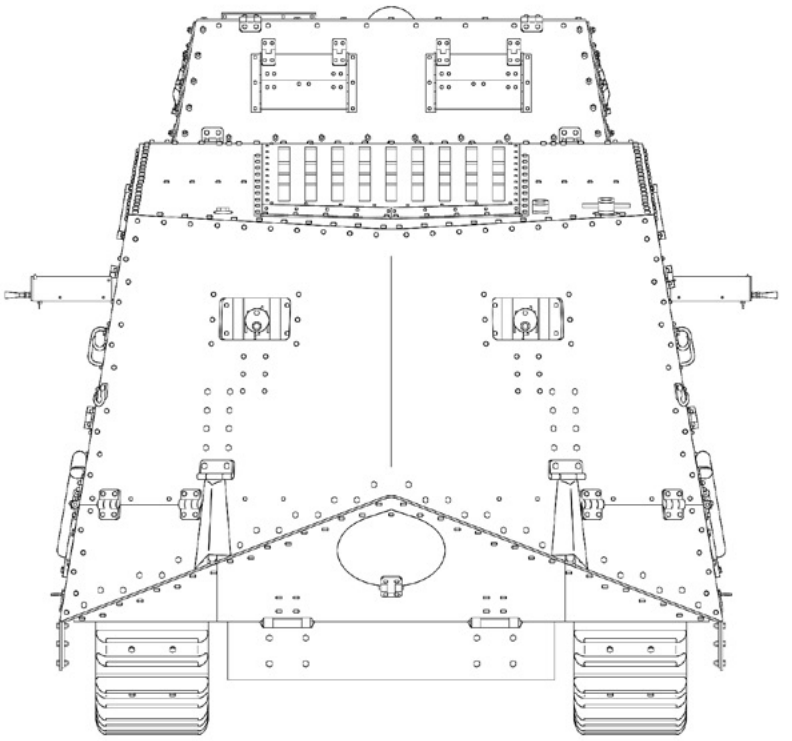
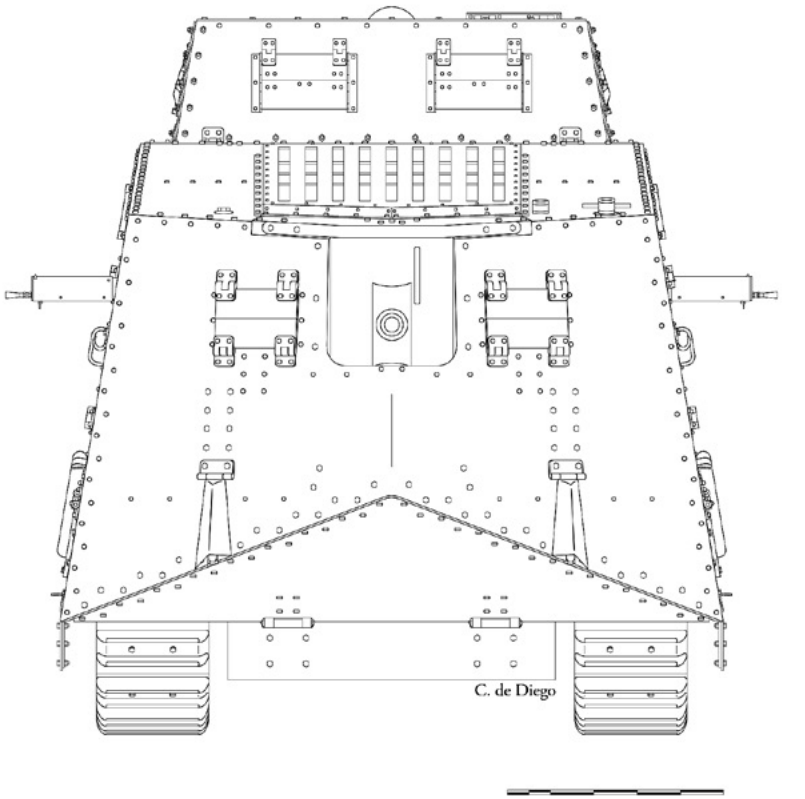
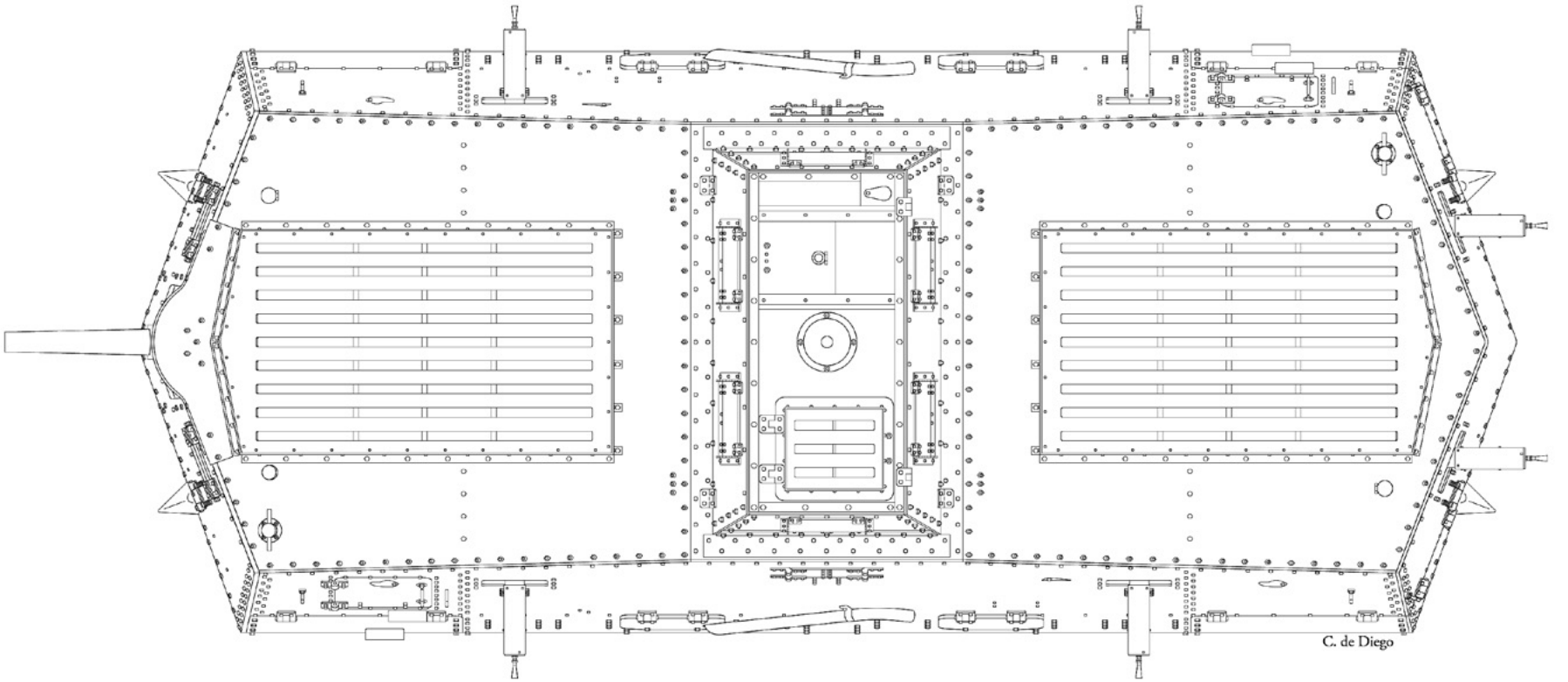
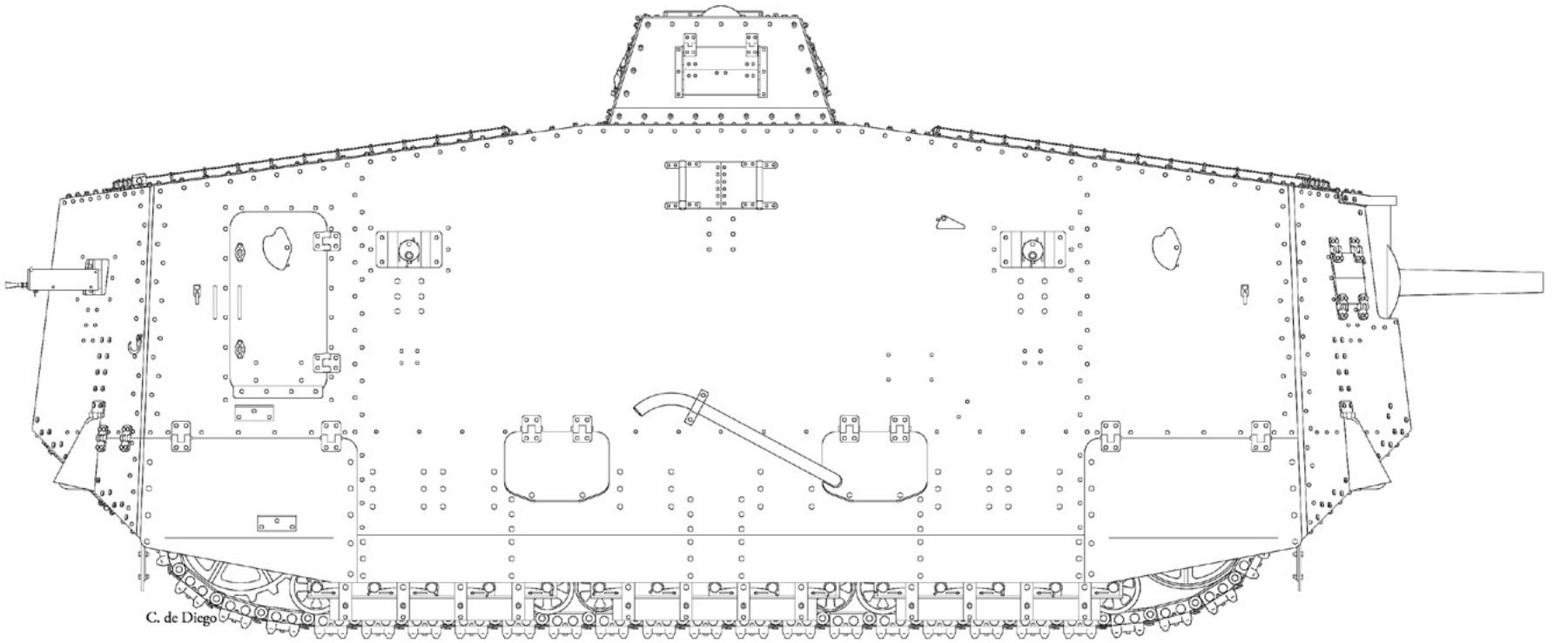




A7V-Sturmpanzerwagen. Second production lot. Scale 1/35



A7V-Sturmpanzerwagen. Second production lot. Scale 1/35



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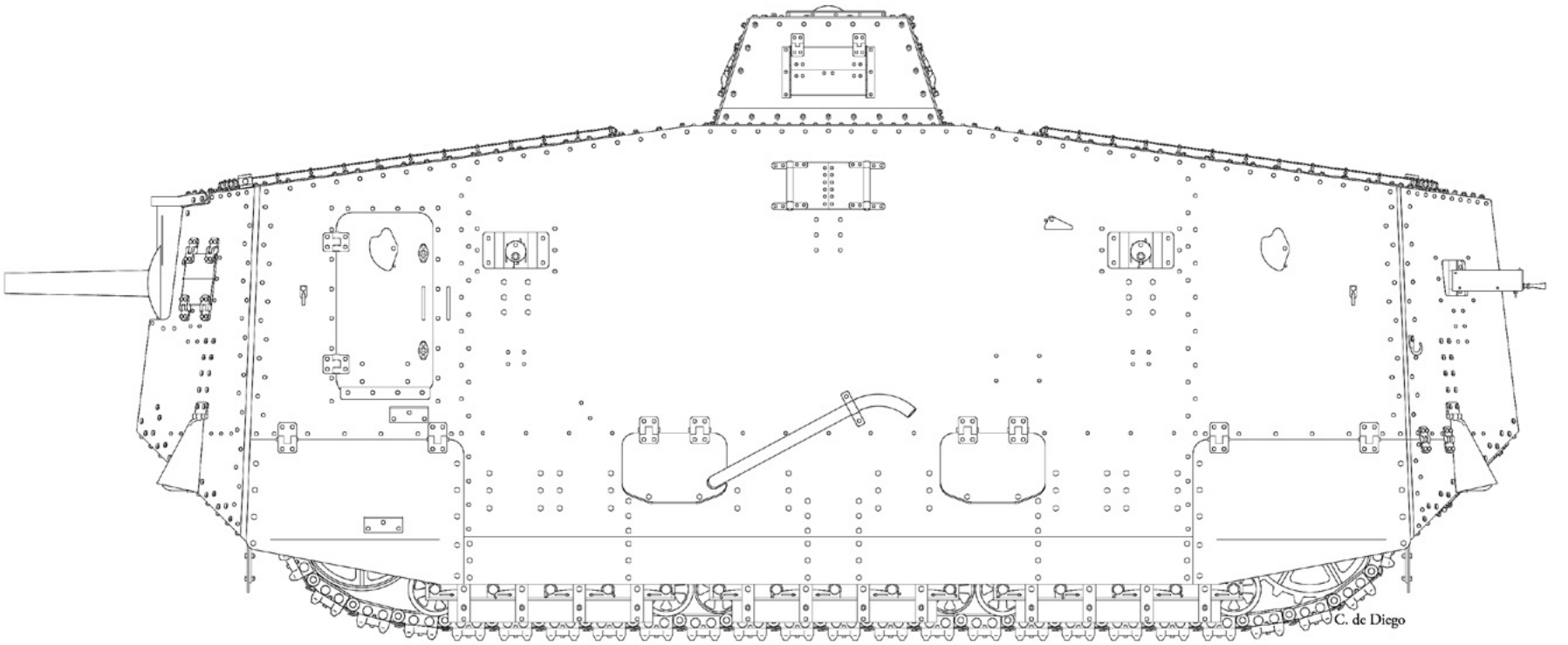
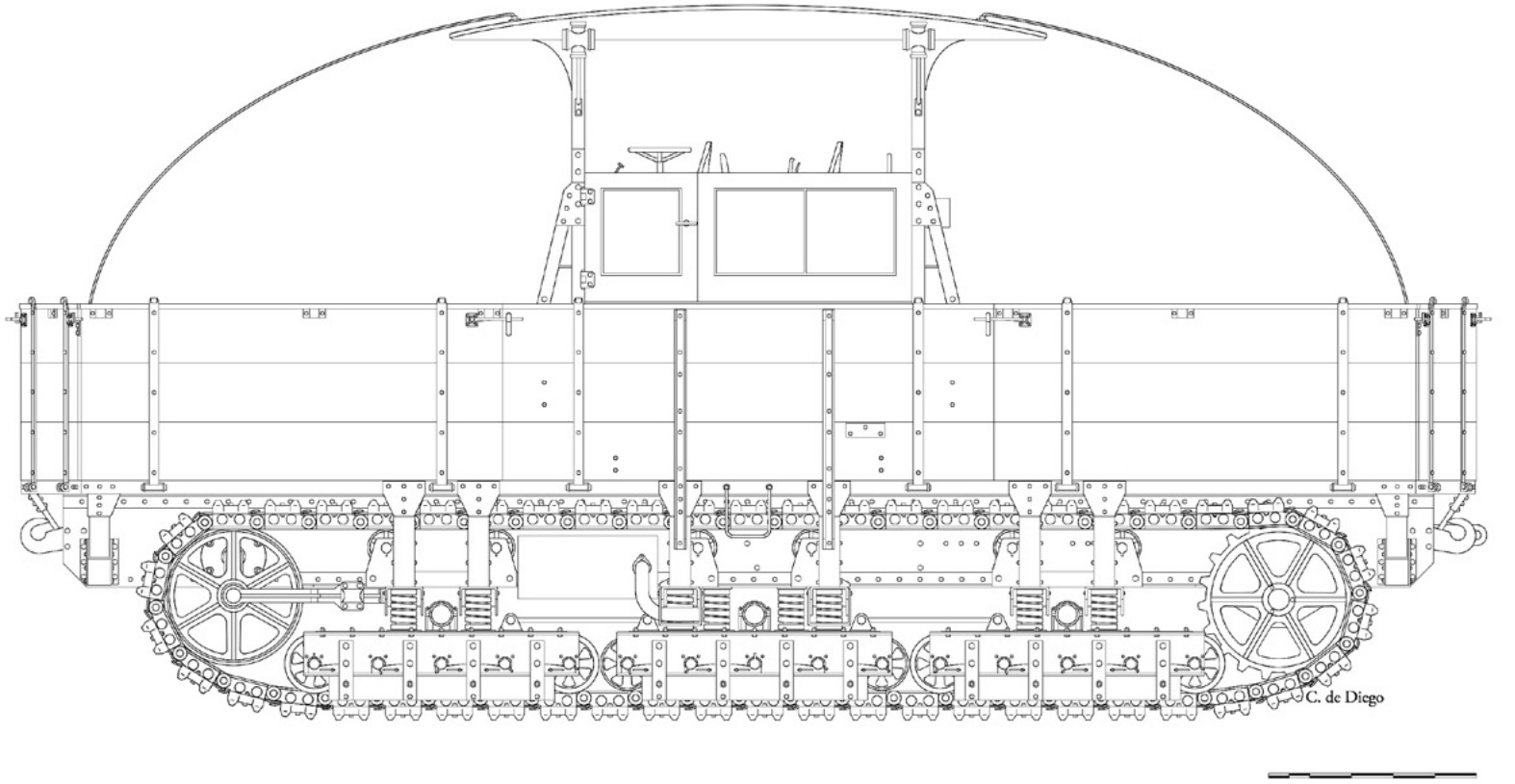
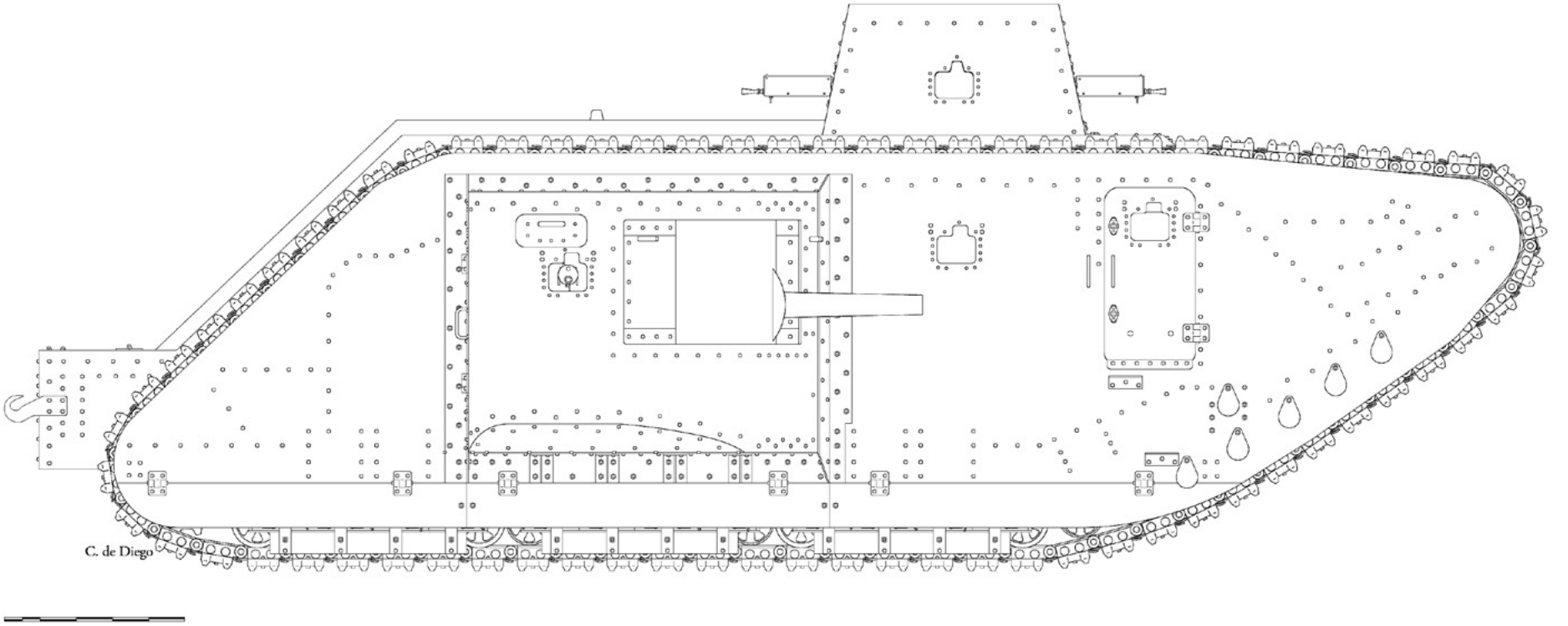


A7V-Geländewagen. Scale 1/35



A7V-Umlaufendeketten. Scale 1/35



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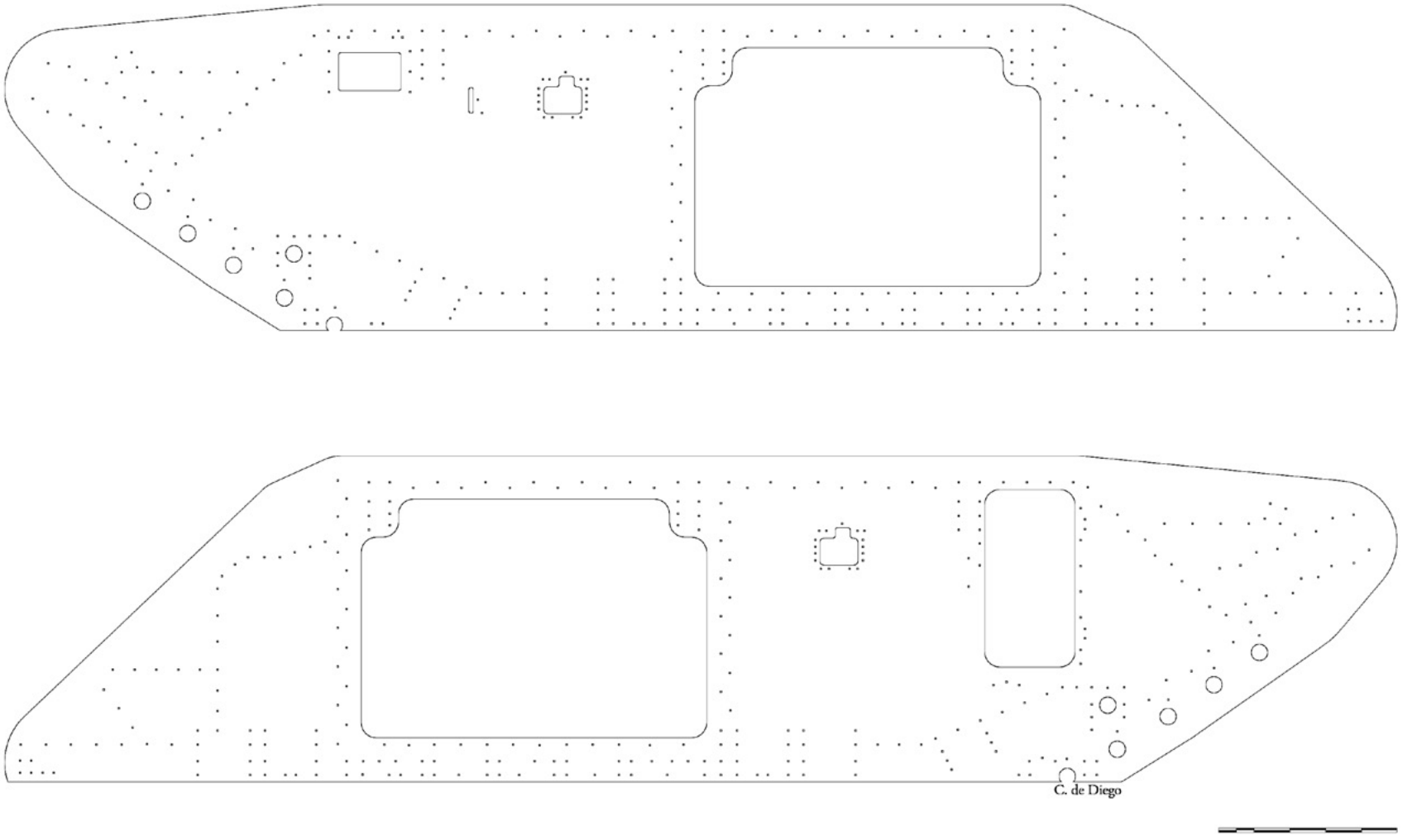

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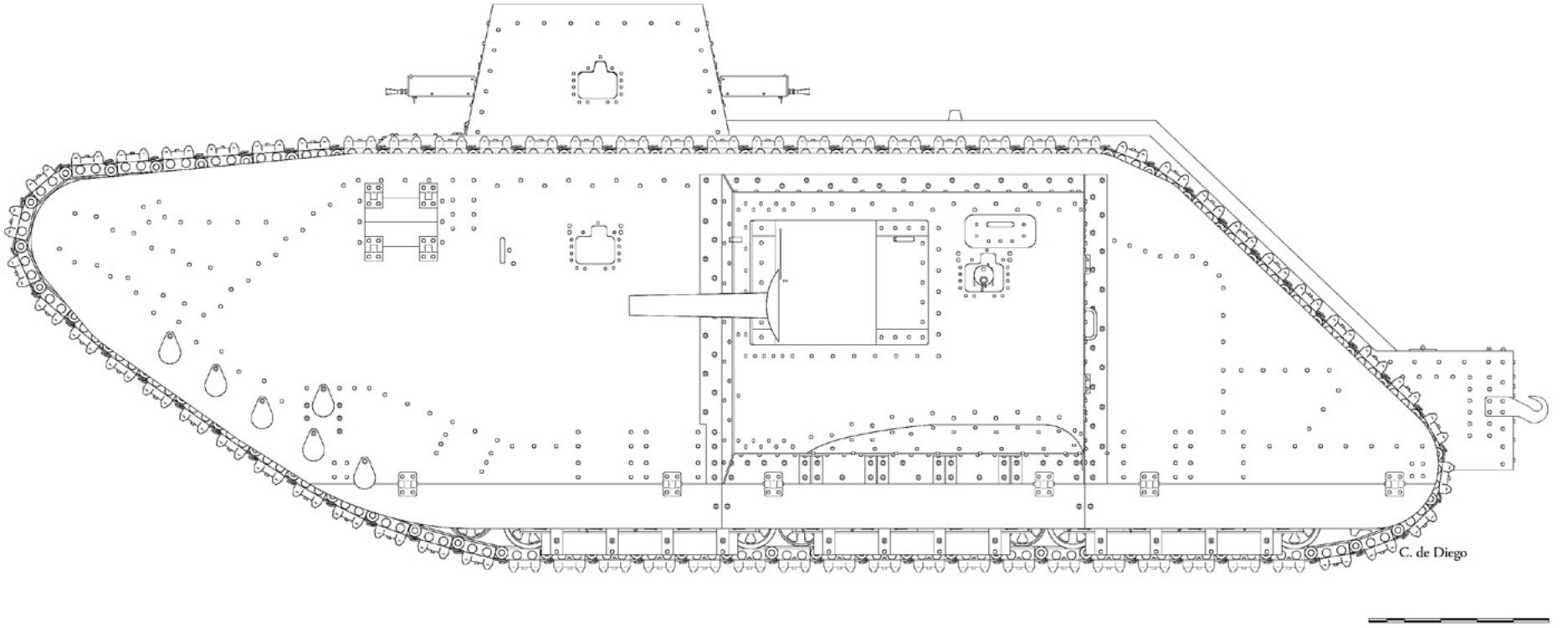
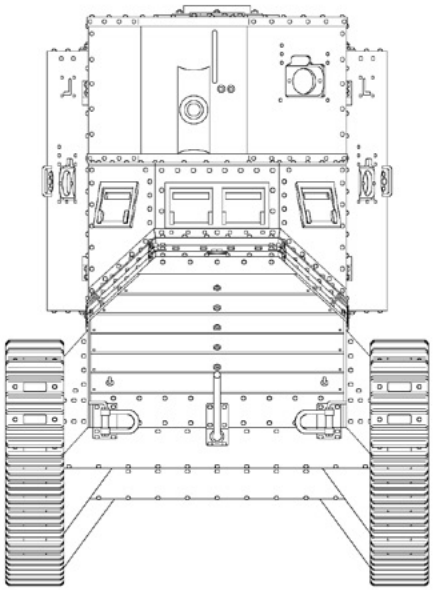
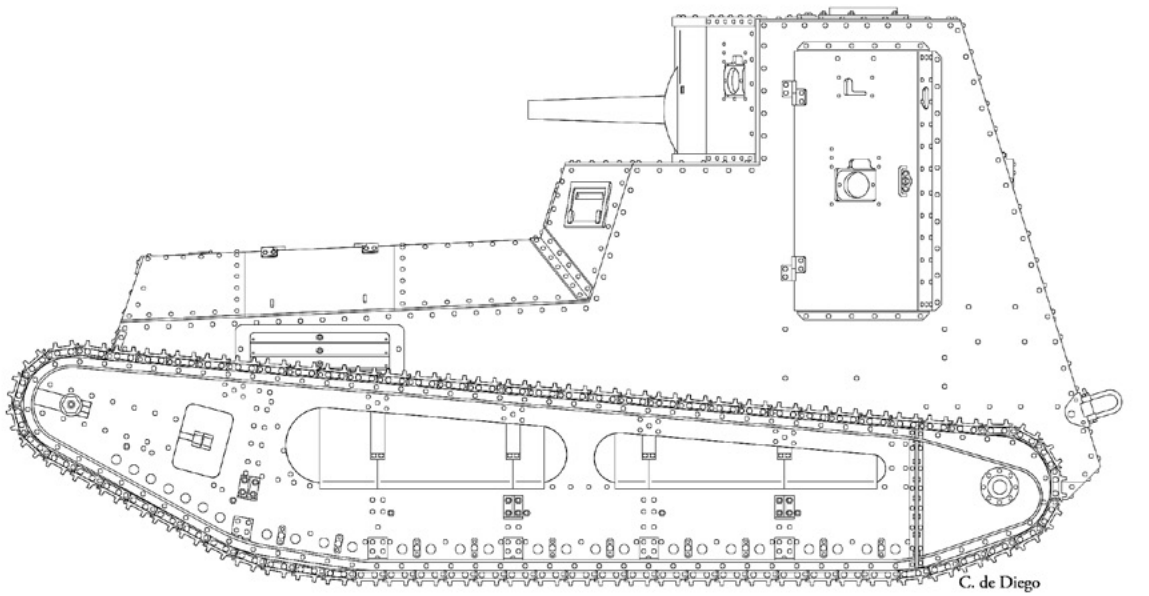
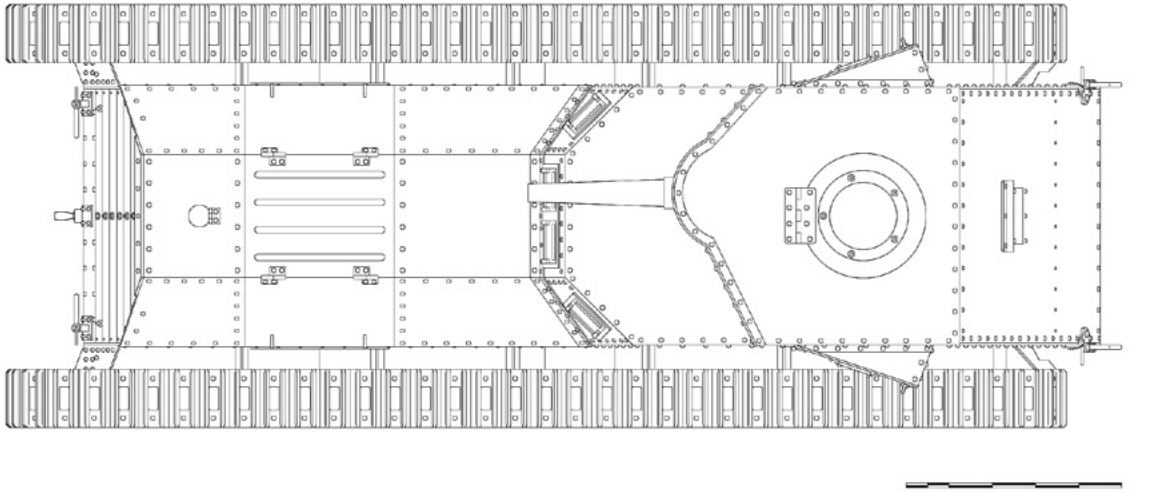


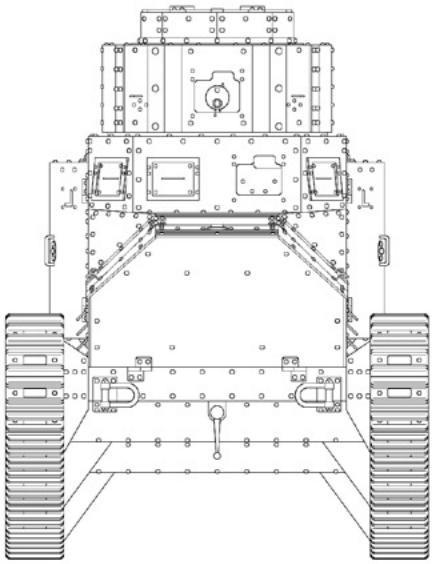
Leichte Kampfwagen LK-II (Kanone). Scale 1/35

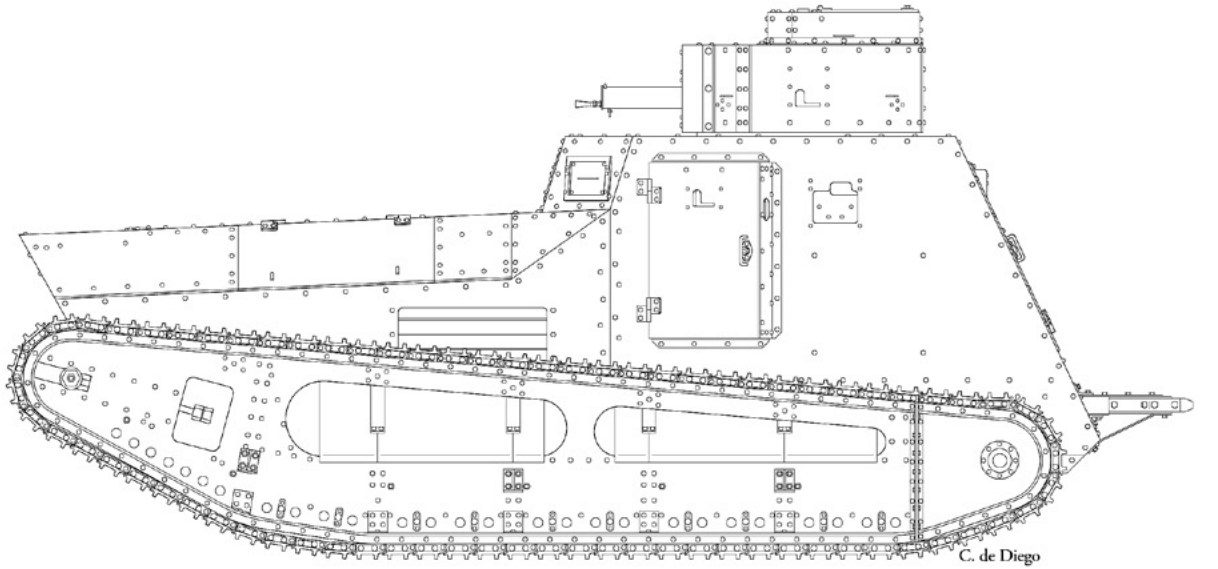


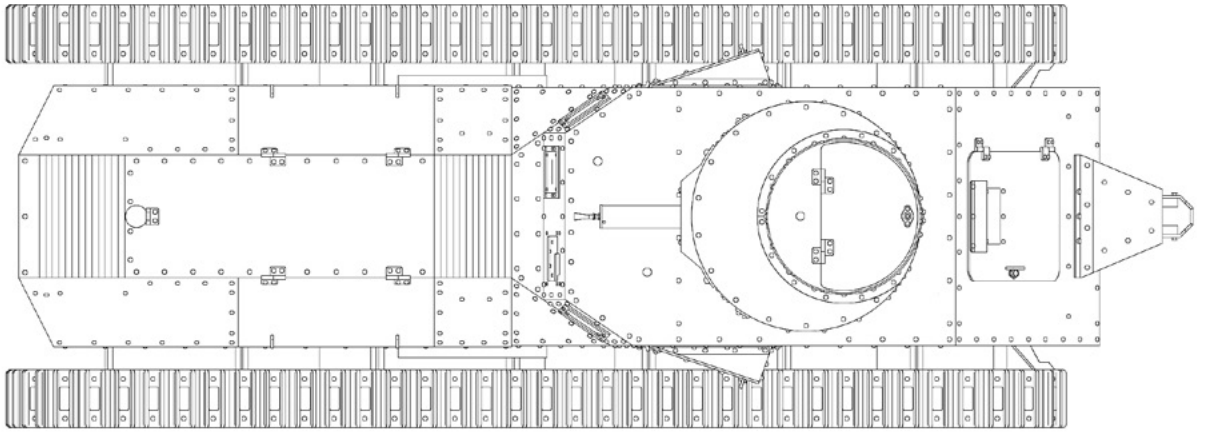




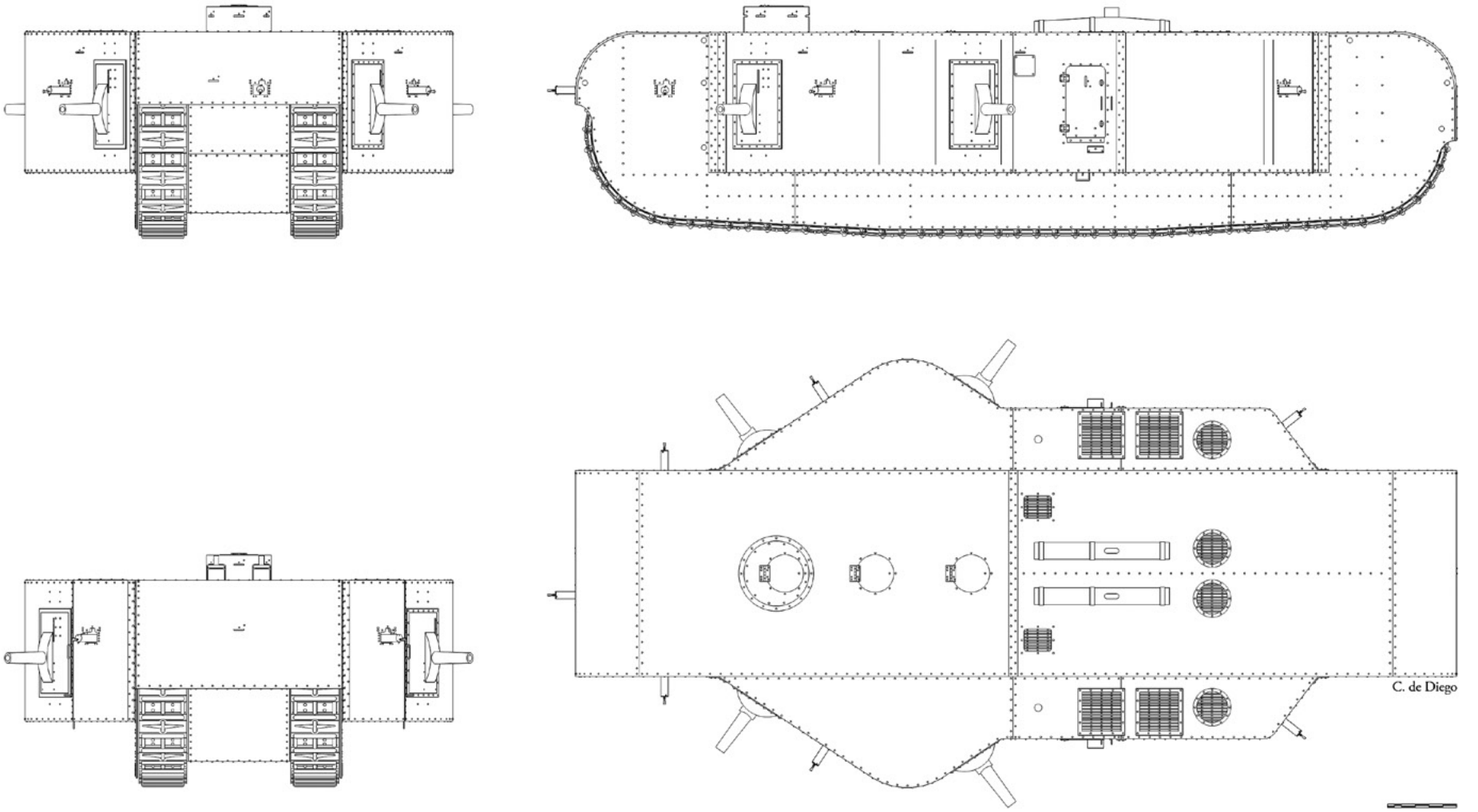
Leichte Kampfwagen LK-II (MG). Scale 1/35







Grosskampfwagen (K-Wagen). Scale 1/87



	A7V	A7V-U	LK-I	LK-II	LK-II (MG)	K-Wagen	Beutepanzer Mk. IV	Beutepanzer Mk. A Whippet
Main Weapons	1x57 mm.	2x57 mm.	1x7.92 mm.	1x37 mm.	1x7.92 mm.	4x77 mm.	2x57 mm. or 2x7.92 mm.	1x7.92 mm.
Auxiliary Weapons	6x7.92 mm.	4x7.92 mm.	----	----	----	7x7.92 mm.	2x7.92 mm.	3x7.92 mm.
Armor	30-10 mm.	20-14 mm.	14-8 mm.	14-8 mm.	14-8 mm.	30 mm.	16-12 mm.	14-6 mm.
Weight	30 t.	39.8 t.	6.9 t.	8.75 t.	8.5 t.	152 t.	28/26.4 t.	14.22 t.
Length	731.5 cm. (with no barrel)	850 cm.	578.5 cm.	508 cm.	508 cm. (without tail)	1,270 cm.	806 cm.	604 cm.
Width	307.5 cm.	469 cm.	175 cm.	195 cm.	195 cm.	615 cm.	411 cm.	262 cm.
Height	333 cm.	314 cm.	225 cm.	267.5 cm.	255 cm.	330 cm.	249 cm.	273 cm.
Engine	2x100 CV	2x100 CV	50-60 CV	50-60 CV	50-60 CV	2x650 CV	125 CV	2x45 CV
Max Speed	14 Km/h	16 Km/h	16 Km/h	12-16 Km/h	12-16 Km/h	7.5 Km/h	6.4 Km/h	12.8 Km/h
Crew	21 men	7 men	3 men	3 men	3 men	22/27 men	8 men	3 men

It is quite probable that this *Mk. IV Male* variant called "Fritz" was assigned to *Abteilung Nr. 15*. The camouflage is an early variant of the *Buntfarben Anstrich* pattern and consists of some *Rotbraun*, *Ocker* and *Feldgrau* (or *Grün*) blotches with some black outlining. (Archive Harold Biondo)

NOTES

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29. ZALOGA, Steven J., op.cit., p. 29.
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31. Ibidem., pp. 41 y 42.
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2. STRASHEIM, Rainer, op.cit., p. 9.
3. ZALOGA, Steven J. , op.cit., p. 13.

Camouflage patterns

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Deutsche PANZER

German Tanks in World War I (1917-1918)

Although Germans did not really trust tanks -a new weapon employed at the battlefront for the first time by the end of 1916, during the Battle of Somme- the OHL carried out a much important program focusing on both the development and the production of armored vehicles. The result was the *A7V*, the only German tank that entered combat during WWI.

This book is a further analyze on the process of creation the German armored forces during the 1916-18 period. It also focusses on the organization of those forces and describes in full detail the characteristics and the history of all *A7V* that were manufactured and sometimes captured. This book includes numerous blueprints, photographs, and more than thirty profiles.

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